ORDER NO. MD0604118C3

Service

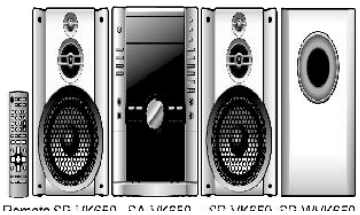
DVD Stereo System

SA-VK650GC / SA-VK650GN / SA-VK650GS / SA-VK650GCS / SA-VK650GCT

Colour

(S)... Silver Type

Notes: This model's DVD/CD mechanism changer unit is CRS1D. Please refer to the original Service Manual (Order No. MD0603065A3) for this mechanism.



SPECIFICATIONS

Specifications

■ AMPLIFIER SECTION

RMS Output Power Stereo mode :

Front CH (both ch driven)

95 W per channel (4), 1 kHz, 10% THD

Subwoofer Ch	**95 W (4), 100 Hz, 10% THD**
Total RMS Stereo mode power For GC, GS, GCS & GCT	**285 W**
PMPO output power	**3000 W**

■ FM/AM TUNER, TERMINALS SECTION

Preset station	**FM 15 stations** **AM 15 stations**
Frequency Modulation (FM)	
Frequency range	**87.50 to 108.00 MHz (50 kHz step)**
Sensitivity	**4.0 V (IHF)**
S/N 26dB	**2.2 V**
Antenna terminals	**75 (unbalanced)**
Amplitude Modulation (AM)	
Frequency range	**522 to 1629 kHz (9 kHz step)** **520 to 1630 kHz (10 kHz step)**
AM Sensitivity S/N 20dB at 999 kHz	**560 V/m**
Digital audio output	
Coaxial digital output	**Pin jack**
Phone jack	
Terminal	**Stereo, 3.5 mm jack**
Mic jack	
Sensitivity	**0.7 mV, 600**
Terminal	**Mono, 6.3 mm jack (2 system)**
Music Port Jack (Front)	
Sensitivity	**100 mV, 4.7 k**
Terminal	**Stereo, 3.5 mm jack**

CASSETTE DECK SECTION

Track system	**4 Tracks, 2 Channels**
Heads	
Record/playback	**Solid permalloy head**
Erasure	**Double gap ferrite head**
Motor	**DC servo motor**
Recording system	**AC bias 100 kHz**
Erasing system	**AC erase 100 kHz**
Tape speed	**4.8 cm/sec**
Overall frequency response (+3, -6 dB) at DECK OUT	
Normal	**35 Hz to 14 kHz**
S/N ratio	**50 dB (A-WTD)**
Wow and flutter	**0.18 % (WRMS)**
Fast forward and rewind time	**Approx. 120 seconds with C-60 cassette tape**

DISC SECTION

Disc played [8 cm or 12 cm]

(1) DVD (DVD-Video, DivX* 6,*7)

(2) DVD-RAM (DVD-VR, JPEG* 4,*7, MP3* 2,*7, MPEG4* 5,*7, DivX* 6,*7)

(3) DVD-R (DVD-Video, DVD-VR, JPEG* 4,*7, MP3* 2,*7, MPEG4* 5, *7, DivX* 6,*7)

(4) DVD-R DL (DVD-Video, DVD-VR)

(5) DVD-RW (DVD-Video, DVD-VR, JPEG* 4,*7, MP3* 2,*7, MPEG4* 5,*7, DivX* 6,*7)

(6) +R/ +RW (Video)

(7) +R DL (Video)

(8) CD,CD-R/RW [CD-DA, Video CD, SVCD* 1, MP3* 2,*7, WMA* 3,* 7, JPEG* 4,*7, MPEG4* 5,*7, DivX* 6,*7, HighMAT Level 2 (Audio and Image)]

* 1 Conforming to IEC62107

* 2 MPEG-1 Layer 3, MPEG-2 Layer 3

* 3 Windows Media Audio Ver 9.0 L3
Not compatible with Multiple Bit Rate (MBR)

* 4 Exif Ver 2.1 JPEG Baseline files
Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

* 5 MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders. Conforming to SD VIDEO specifications (ASF standard)/ MPEG4 (Simple Profile) video system/ G.726 audio system.

* 6 Plays all versions of DivX® video (including DivX 6) with standard playback of DivX® media files. Certified to the DixV Home Theater Profile. GMC (Global Motion Compensation) is not supported.

* 7 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

Pick up	
Wavelength	
CD	785 nm
DVD	662 nm
Laser Power	
CD	CLASS 1M
DVD	CLASS 1
Audio output (Disc)	
Number of channels	(FL, FR) 2 ch (stereo)

VIDEO SECTION

Video system	PAL625/50, PAL525/60, NTSC
Composite video output	
Output level	1 Vp-p (75)
Terminal	Pin jack (1 system)
S-video output	
Y output level	1 Vp-p (75)
C output level	0.3 Vp-p (75) (PAL)
	0.286 Vp-p (75) (NTSC)
Terminal	S terminal (1 system)
Component video output	
[NTSC : 480p/480i, PAL : 576p/576i]	
Y output level	1 Vp-p (75)

PB output level	0.7 Vp-p (75)
PR output level	0.7 Vp-p (75)
Terminal	
	Pin jack (Y: green, PB: blue, PR: red) (1 system)

■ GENERAL

Power supply	
For GC only	AC 220 V to 240 V, 50/60 Hz
For GN only	AC 230 V to 240 V, 50 Hz
For GS/GCS/GCT only	
AC 110 V to 127 V/220 V to 240 V, 50/60 Hz	
Power consumption	105 W
Power consumption in standby mode:	
	0.9 W (approx.)
Dimensions (W x H x D)	250 mm x 330 mm x 333.6 mm
Mass	7.5 kg
Operating temperature range	+5 to +35°C
Operating humidity range	5 to 90% RH (no condensation)

■ SYSTEM

SC-VK650(GC)	Music Center: SA-VK650 (GC)
	Speaker: SB-VK650 (GC)
	Subwoofer: SB-WVK650 (GC)
SC-VK650(GN)	Music Center: SA-VK650 (GN)
	Speaker: SB-VK650 (GC)
	Subwoofer: SB-WVK650 (GC)
SC-VK650(GS)	Music Center: SA-VK650 (GS)
	Speaker: SB-VK650 (GC)
	Subwoofer: SB-WVK650 (GC)
SC-VK650(GCS)	Music Center: SA-VK650 (GCS)
	Speaker: SB-VK650 (GC)
	Subwoofer: SB-WVK650 (GC)
SC-VK650(GCT)	Music Center: SA-VK650 (GCT)
	Speaker: SB-VK650 (GC)
	Subwoofer: SB-WVK650 (GC)

For information on speaker system, please refer to the original Service Manual (Order No. MD0603107C3) for SB-VK650GC-S and (Order No. MD0603108C3) for SB-WVK650GC-S.

Notes:

1. Specifications are subject to change without notice. Mass and dimensions are approximate.

2. Total harmonic distortion is measured by the digital spectrum analyzer.

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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

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may be obtained from MPEG LA, LLC.
See http://www.mpegla.com.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service
or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

1. Safety Precautions

1.1. General Guidelines

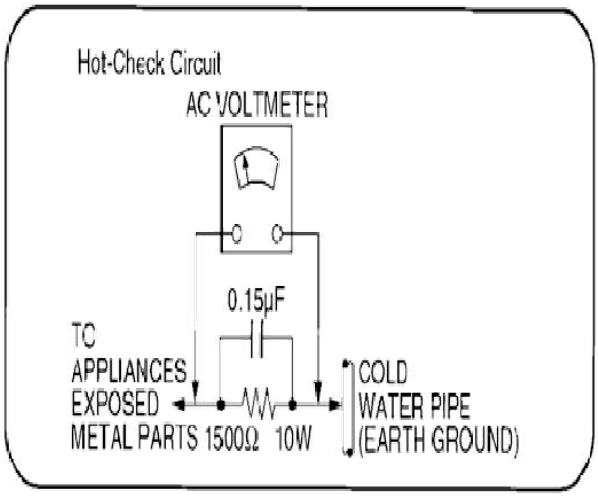
1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M and 5.2M .
   When the exposed metal does not have a return path to the chassis,

   the reading must be .

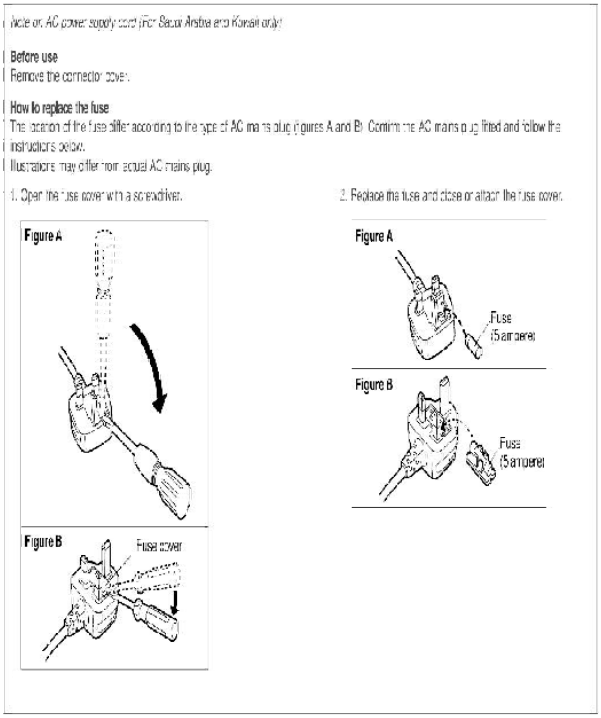
Figure 1



1.1.2. Leakage Current Hot Check / (See Figure 1)

1. **Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.**
2. **Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.**
3. **Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.**
4. **Check each exposed metallic part, and measure the voltage at each point.**
5. **Reverse the AC plug in the AC outlet and repeat each of the above measurements.**
6. **The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.**

1.2. Safety Precaution for AC Power Supply Cord (For GS/GC only)


Note on AC power supply cord (For Saudi Arabia and Kuwait only)
Before use
Remove the connector cover.
How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.
1. Open the fuse cover with a screwdriver.
2. Replace the fuse and close or attach the fuse cover.
Figure A
Figure B
Fuse cover
Figure A
Fuse
(5 amperes)
Figure B
Fuse
(5 amperes)

1.3. Before Use (For GS/GCS/GCT only)

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus(-) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used. (If the power supply in your area is 117V or 120V, set to the "117V or 120V" position.)
Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries, the correct voltage is already set.)

1.4. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C2550, C2556, C5101, C5104, C5165, C5166, C5171, C5172, C5950 and C5966 through a 10 , 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at AC 220/240V, 50/60 Hz in NO SIGNAL (vol. min, at CD mode) should be ~200mA . [For GC only]
Current consumption at AC 230-240V, 50 Hz in NO SIGNAL (vol. min, at CD mode) should be ~200mA . [For GN only]
Current consumption at AC 100~120V, 50/60 Hz & AC 220/240V, 50Hz in NO SIGNAL (vol. min, at CD mode) should be ~300mA and ~200mA respectively. [For GCS/GS/GCT only]

1.5. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.

- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are
"shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.
If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note :
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. **Minimize body motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).**

IMPORTANT SAFETY NOTICE
There are special components used in this equipment which are important for safety.
These parts are marked by △ in the schematic diagrams, Exploded Views and replacement parts lis: It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

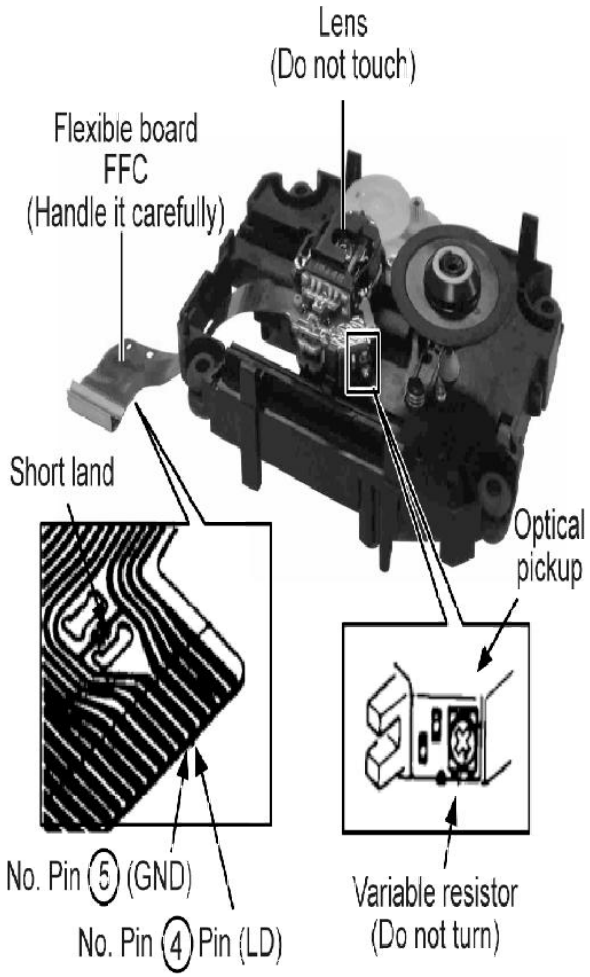
3. Handling Precautions for Traverse Unit

The laser diode used inside optical pickup could be destroyed due to static electricity as a potential difference is caused by electrostatic load discharged from clothes or human body. Handling the parts carefully to avoid electrostatic destruction during repair.

3.1. Handling Optical Pickup

1. **Do not impact on optical pickup as the unit structurally uses an extremely precise technology.**
2. **Short-circuit the flexible cable of optical pickup remove from the circuit board using a short-circuit pin or clip in order to prevent laser diode from electrostatic destruction (Refer to Fig. 3.1 and Fig. 3.2)**
3. **Do not handle flexible cables forcibly as this may cause snapping. Handle the parts carefully (Refer to Fig. 3.1)**
4. **A new optical pickup is equipped with an anti-static flexible cable. After replacing and connecting to the flexible board, cut the anti-static flexible cable. (Refer to Fig. 3.1)**

Fig 3.1



3.2. Replacing Precautions for Optical Pickup Unit

CD/DVD Optical Pickup

The optical pickup by which part supply was carried out attaches the short clip to the flexible board for laser diode electrostatic discharge damage prevention. Please remove the short clip and be sure to check that the short land is open, before connecting. (Please remove solder, when the short land short-circuits.)

3.3. Grounding for Preventing Electrostatic Destruction

1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity accumulated in your body. (Refer to Fig. 3.2)

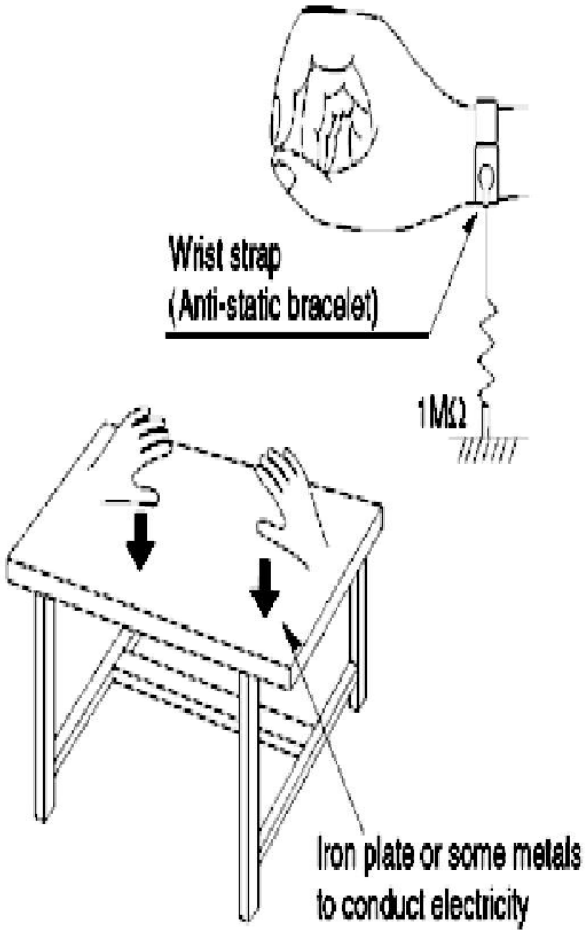
2. Work place grounding

Place a conductive material (conductive sheet) or ironboard where optical pickup is placed. (Refer to Fig. 3.2)

Note :

Keep your clothes away from optical pickup as wrist strap does not release the static electricity charged in clothes.

Fig. 3.2



4. Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens. / Wavelength : 785 nm(CD)/662 nm(DVD) / Maximum output radiation power from pick up : 100 W/VDE

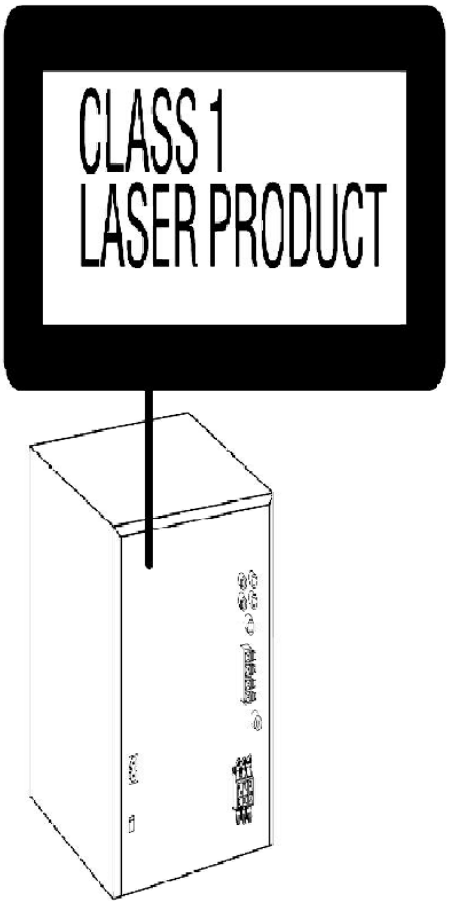
Laser radiation from pick up unit is safety level, but be sure the followings:

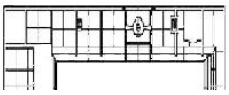
1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick up lens for a long time.**

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels





5. Warning

5.1. Service caution based on legal restrictions

5.1.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.
The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder. **(See right figure)**	

Service caution for repair work using Lead Free Solder (PbF)

- **The lead free solder has to be used when repairing the equipment for which the lead free solder is used.**
  (Definition: The letter of "PbF" is printed on the PCB using the lead free solder.)
- **To put lead free solder, it should be well molten and mixed with the original lead free solder.**
- **Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.**
- **Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.**
- **Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).**

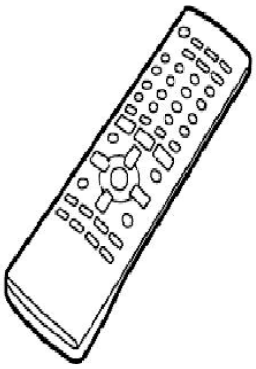
Recommended Lead Free Solder (Service Parts Route.)

- **The following 3 types of lead free solder are available through the service parts route.**
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

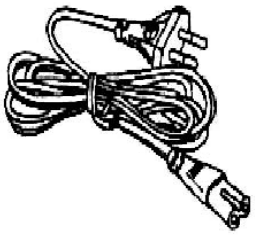
Note
*** Ingredient: Tin (Sn), 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%**

6. Accessories

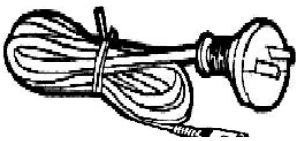
Remote control



AC cord (For GC, GS, GCS & GCT only)



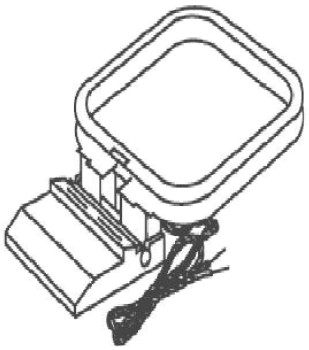
AC cord (For GN only)



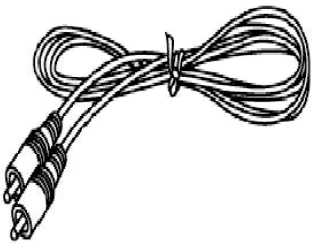
AC cord (For GS only)

FM indoor antenna

AM loop antenna



Video cable



7. Operation Procedures

7.1. Main Unit Operation Control

7.2. Remote Control Operation Control

7.3. Disc Information

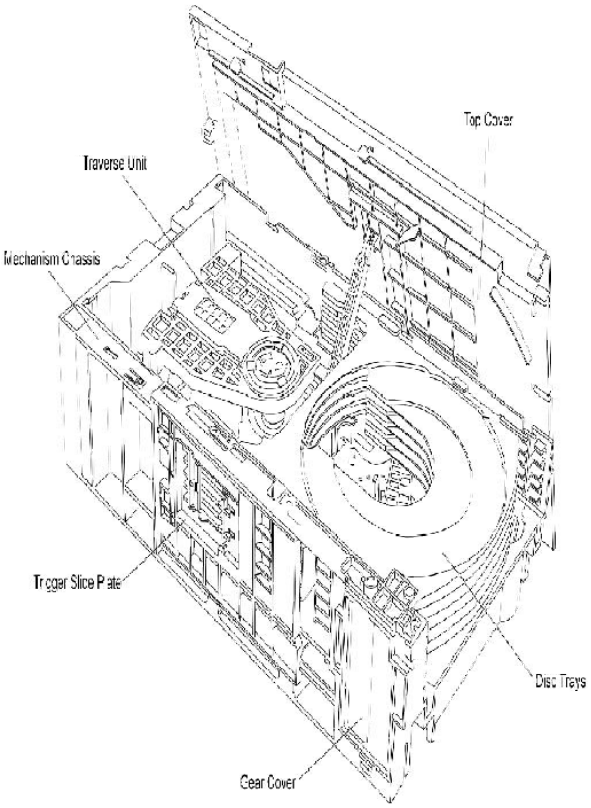
7.3.1. Disc Playability

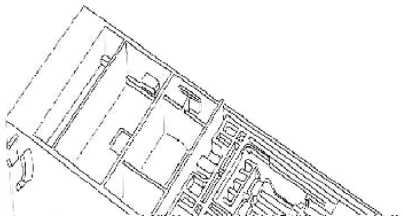
7.3.2. To Play MP3/WMA and still pictures (JPEG/tiff)

7.4. DivX VOD Content

8. New Features

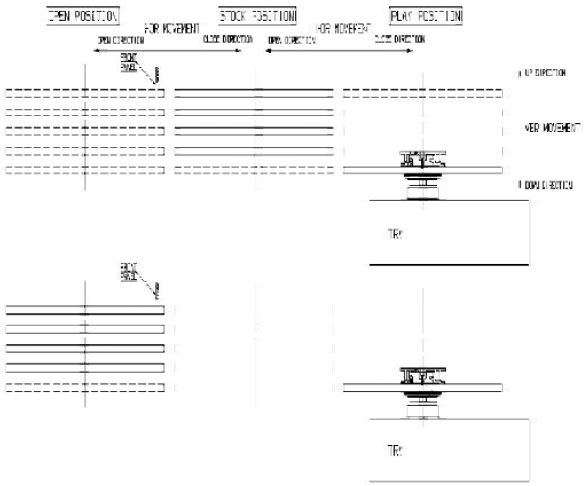
8.1. CRS1D Mechanism Overview


Top Cover
Traverse Unit
Mechanism Chassis
Trigger Slide Plate
Disc Trays
Gear Cover



8.1.1. General Feature

- This is a five disc changer mechanism for CD/DVD. The outline figure is shown below.



- The mechanism has "CHANGE WHILE PLAY" function. It open other trays for disc exchanging while one tray is at PLAY position performing recording or reproducing.

- The mechanism can quickly change all trays with "CHANGE ALL" function. All trays can be move to OPEN position with one operation.

- There is no sensor to indicate presence of disc on any tray.

8.1.2. Hardware composition

- Below is the hardware components of the mechanism

Name	Function
Open Switch (OPEN-SW)	The switch is used to detect normal tray opening
	The switch is used for detect tray being manually push/trigger when full open
Home Switch (HOME-SW)	Is used to detect cam gear home position
Close Sensor (CLOSE-SENSOR)	Used for normal single tray closing
	Used to detect cam gear rotate to Play Driving position
Play Switch (PLAY-SW)	Detect TRV clamping complete position
Stocking Switch (STOCK-SW)	Detect tray completely transfer for play position to stocking position
UD Sensor (UD-SENSOR)	Detect TRV vertical movement position
Top Switch (TOP-SW)	Detect a default position of TRV vertical movement position
Driver IC	To drive Motor
Motor	Main driving source for changer
Plunger	Switching the driving source from motor to: 1. Tray open/close 2. Drive tray to play/stock position and TRV vertical movement

8.1.3. Mechanism Operation

- This mechanism has the following state:
  1. Driving of a tray to open/close
  2. Up/down operation of a traverse performs a state changes of tray. By using the plunger to lift/release of a switching gear, and the cam gear to lift/release the function gear the motor can be link to several gear trains to perform various operations.
- The functions that can be perform in this mechanism are described as below:

Condition	Explanation
Open current playing tray	The state to change current playing disc. All tray will be open at once and current tray at PLAY position will be expose.
Open All	The state where all trays being driven to OPEN position. The disc can be take in or out from tray to tray by close tray one by one from top to bottom.
Stock	The state where the trays are stored in STOCK position
Play	The state where one of the tray 5 trays is being driven to PLAY position and clamped by traverse unit
Play & Open Tray-*	The state where one of the tray is in playing position performing recording or reproducing, other trays can be used (OPEN position) for disc exchanging without stopping the recording or reproducing process.
Change	The state when one of the opened tray being driven from OPEN position to STOCK position and other opened trays remain still at OPEN position.
Close All	The state where all open trays will being driven from OPEN position to STOCI position, one by one from top to bottom

8.1.4. New CD/DVD Mechanism (CRS1D)

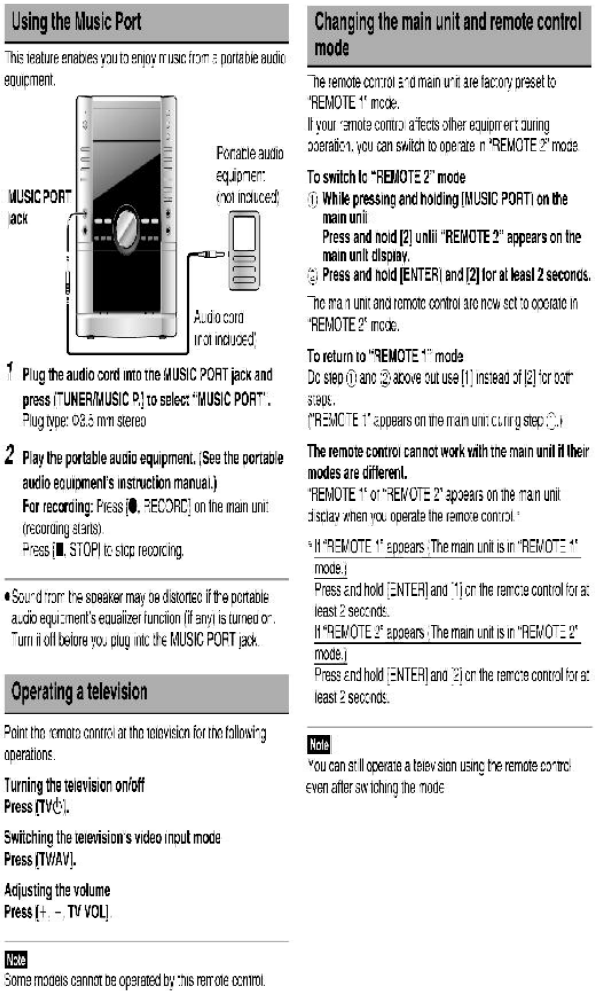
Note:

This service manual does not contain the following information for the mention CD/DVD Mechanism drive:

- Schematic Diagram, Block Diagram and P.C.B. layout of CD/DVD Loading P.C.B.
- Part List for individual parts of the mechanism.
- Exploded View and Parts List for individual parts of the CD/DVD Mechanism drive.

Please refer to the original service manual (Order No. MD0603065A3) for the CD/DVD Mechanism Drive CRS1D.

8.2. Music Port



Using the Music Port

This feature enables you to enjoy music from a portable audio equipment.

MUSIC PORT jack

Portable audio equipment (not included)

Audio cord (not included)

1 Plug the audio cord into the MUSIC PORT jack and press [TUNER/MUSIC P.] to select "MUSIC PORT".
Plug type: Ø3.5 mm stereo

2 Play the portable audio equipment. (See the portable audio equipment's instruction manual.)
For recording: Press [●, RECORD] on the main unit (recording starts).
Press [■, STOP] to stop recording.

• Sound from the speaker may be distorted if the portable audio equipment's equalizer function (if any) is turned on. Turn it off before you plug into the MUSIC PORT jack.

Operating a television

Point the remote control at the television for the following operations.

Turning the television on/off
Press [TV⏻].

Switching the television's video input mode
Press [TV/AV].

Adjusting the volume
Press [+, –, TV VOL].

Note
Some models cannot be operated by this remote control.

Changing the main unit and remote control mode

The remote control and main unit are factory preset to "REMOTE 1" mode.
If your remote control affects other equipment during operation, you can switch to operate in "REMOTE 2" mode.

To switch to "REMOTE 2" mode
① While pressing and holding [MUSIC PORT] on the main unit
Press and hold [2] until "REMOTE 2" appears on the main unit display.
② Press and hold [ENTER] and [2] for at least 2 seconds.

The main unit and remote control are now set to operate in "REMOTE 2" mode.

To return to "REMOTE 1" mode
Do step ① and ② above but use [1] instead of [2] for both steps.
("REMOTE 1" appears on the main unit during step ①.)

The remote control cannot work with the main unit if their modes are different.
"REMOTE 1" or "REMOTE 2" appears on the main unit display when you operate the remote control.

• If "REMOTE 1" appears: The main unit is in "REMOTE 1" mode.
Press and hold [ENTER] and [1] on the remote control for at least 2 seconds.
If "REMOTE 2" appears: The main unit is in "REMOTE 2" mode.
Press and hold [ENTER] and [2] on the remote control for at least 2 seconds.

Note
You can still operate a television using the remote control even after switching the mode.

With reference to page 29 of the operating instruction manual.

9. About HighMAT

9.1. What's HighMAT?

Consumers worldwide are using PCs to create their own collections of music, photos and even video by burning them onto CDs. But how these collections can be experienced across different devices can be confusing to navigate, time consuming to access for a DVD player, and be incomplete in terms of music information available to the customer.
HighMAT offers a solution to this growing consumer problem. HighMAT dramatically improves the digital media experience on consumer electronic devices by delivering a simple, standardized approach that allows consumers who have created personal collections of digital music, photography and video on their PC to:
>> Create a HighMAT CD or DVD which can be easily played back on consumer electronics devices such as CD and DVD players, and car stereos.
>> Move digital media files (using recordable media such as CD-R and CD-RW) between the PC and various playback devices such as CD and DVD players.
A new standard for creating personal media on consumer electronic devices, HighMAT enable easier and more seamless interoperability between Windows PCs and devices designed for your living room, or the car.

HIGH
M·A·T
HighMAT is a new technology which has been co-developed and is supported by Microsoft Corporation and Matsushita Electric Industrial Co., Ltd. (Panasonic). HighMAT stands for High-Performance Media Access Technology. Look for the HighMAT logo on electronics devices - there are three levels of playback support for consumer electronics devices.
HighMAT Official Website

HighMAT Audio

Products which display this logo are able to play back HighMAT audio content only (WMA, MP3)

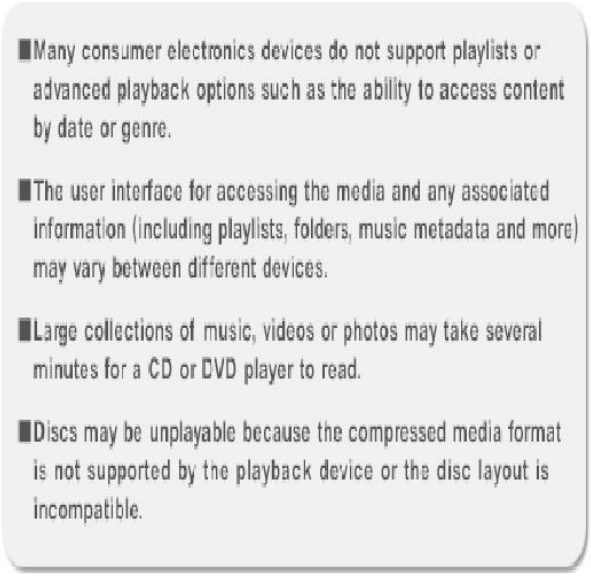
HighMAT Audio and Image

Products which display this logo are able to play back HighMAT audio content (WMA, MP3) and still pictures (JPEG) only

HighMAT Audio, Image and Video

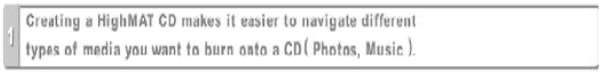
9.2. Why take advantage of HighMAT?

A Problem Defined:Today, when consumers create their own digital audio, video or photo collections on CD-R or other physical formats, there are numerous, inconsistent ways that devices read the data. For the consumer, the playback experience can be confusing:

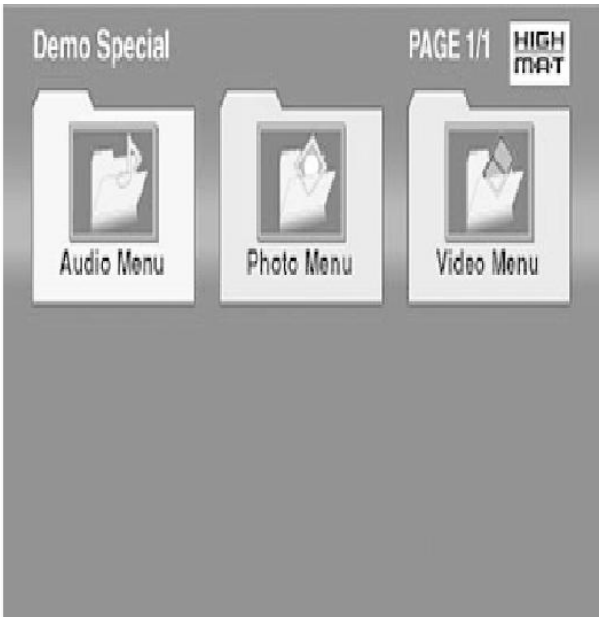

Many consumer electronics devices do not support playlists or advanced playback options such as the ability to access content by date or genre.
The user interface for accessing the media and any associated information (including playlists, folders, music metadata and more) may vary between different devices.
Large collections of music, videos or photos may take several minutes for a CD or DVD player to read.
Discs may be unplayable because the compressed media format is not supported by the playback device or the disc layout is incompatible.

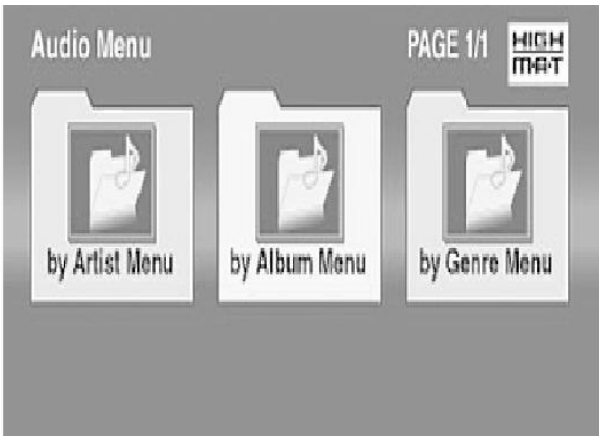
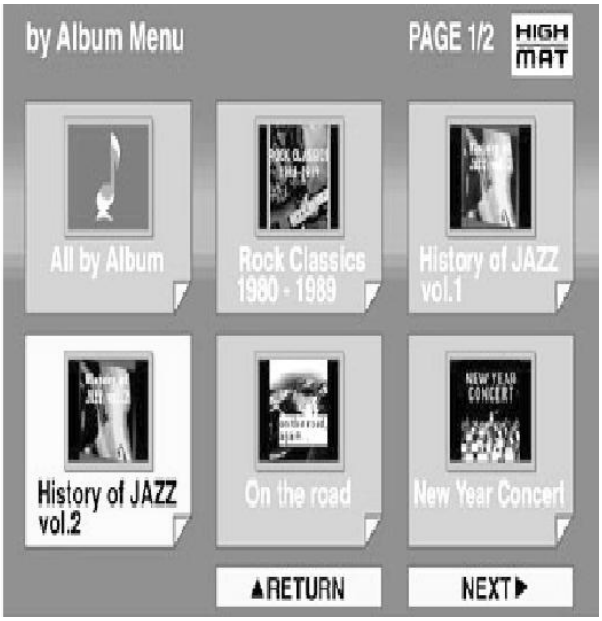
A Solution Created: HighMAT delivers a better digital media access experience by creating a standard approach for PCs to structure digital media on various physical formats and for playback devices to read the data.

9.3. Benefits of HighMAT?

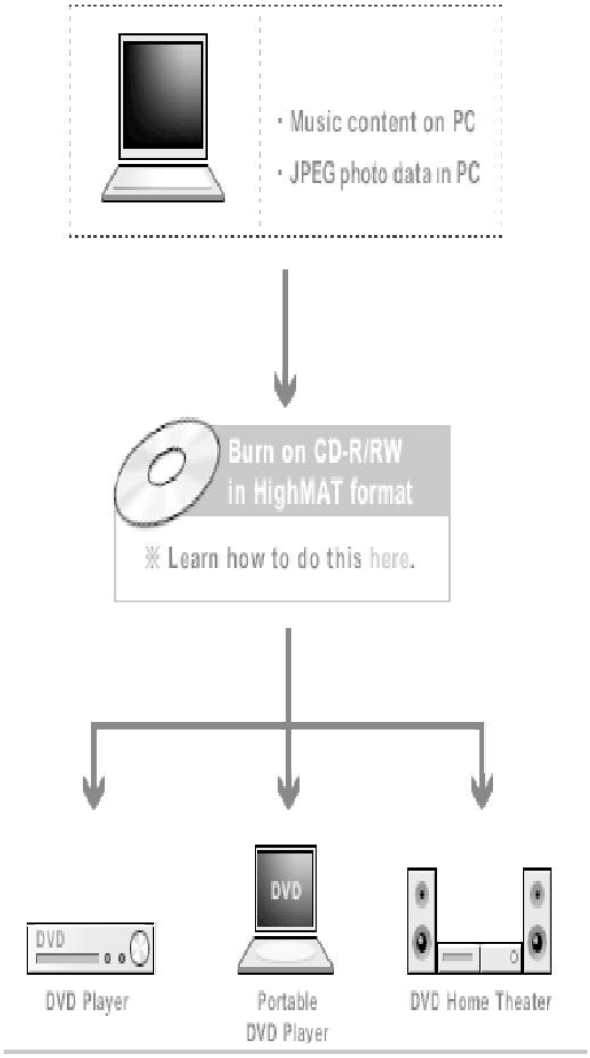


Conventional	HighMAT
Even though DVD player is CD-R/RW compatible, the inconsistent ways that various DVD players can read the music or photos files often leads to a confusing and inconsistant playback experince.	**HighMAT compatible products play content back w consistent interface. This includes products which are JPEG compatible products without HighMAT support.**


Demo Special
PAGE 1/1
HIGH MAT
Audio Menu
Photo Menu
Video Menu


Audio Menu
PAGE 1/1
HIGH MAT
by Artist Menu
by Album Menu
by Genre Menu

Easy navigation to access disc contents

3 HighMAT CDs can also work on other players.



HighMAT is now available for CD Burning and in Leading DVD PlayersHighMAT is a new technology that is now available in leading software and consumer electronic devices to dramatically improve the digital media experience when you create homemade CDsHighMAT delivers a simple, standardized way for PC software and consumer electronics devices to talk to each other and work better together.
When you create your homemade CDs with software that supports HighMAT CD burning, and then play them back on a DVD player that supports HighMAT, you get better, easier navigation. You get folders you can access with a single click of your DVD player's remote control. You can view important information about your music like full song names, artist titles, album names and genre. And you can get faster startup on your home entertainment device.
To enjoy the benefits of HighMAT, all you need is software that supports HighMAT for CD burning of music or photos, as well as a home entertainment device like a DVD player that supports HighMAT for playback. Always look for the HighMAT logo on your software or home entertainment device to ensure it supports the HighMAT experience.

10. Self diagnosis and special mode setting

This unit is equipped with functions for checking and inspecting namely: Self-Diagnostic and Test Mode.

10.1. Service Mode Summary Table

The service modes can be activated by pressing various button combination on the player and remote

control unit.
Below is the summary of major checking:

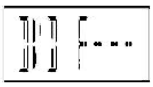
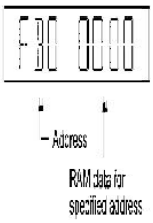
Player buttons	Remote control unit buttons	Application	Note
STOP	0	Error code display	(Refer to the section, "10.2.2 DVD Self Diagnostic Function-Error Code").
	5	Jitter checking	(Refer to the section "10.2.1 Service Mode Table 1 for mor information").
	6	Region display and mode	(Refer to the section "10.2.1 Service Mode Table 1 for mor information").
	7	Micro-processor firmware version check	
	FUNCTIONS	DVD laser drive current check	
	3	CD laser drive current check	
	❚❚	DVD/CD laser drive current check	
	≧10	Initialization of the player (factory setting is restored.) Used after replacement of micro-computer, FLASH ROM IC, EEPROM and HDMI module.	
	8	Region and Firmware version display	
	ENTER	DVD Module Reset	

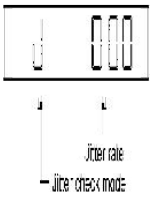
10.2. Service Mode Table 1

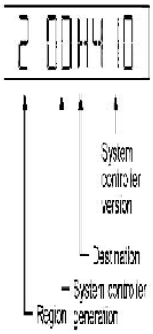
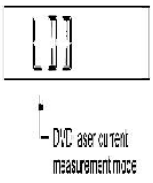
By pressing various button combinations on the player and remote control unit can activate the various service modes for checking.

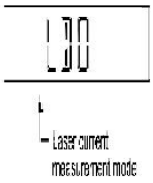
Special Note:
Due to the limitations of the no. characters that can be shown on FL Display, the "FL Display" button on the remote control unit is used to show the following page. (Display 1 / Display 2).

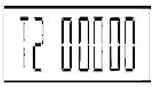
10.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Remote Control Key
Error code check	Error code check. The latest error code stored in the EEPROM IC is displayed.	 Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: DVDnn UXX Error code = 0 x DBXX is expressed: DVDnn HXX Error code = 0 x DXXX is expressed: DVDnn FXXX Error code = 0 x 0000 is expressed: DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, pres STOP button on the player, a "0" button on the remote control unit. *With pointing o cursor up and down on displ Cancelled automatically 5 seconds later. To exit, press [POWER] butt on main unit or remote contr
ADSC internal RAM data check	ADSC internal RAM data check. ADSC internal RAM data is read out and displayed.	 The value is shown in hexadecimal notation. The above example shows the data in ADSC address OFAh is 6901h.	In STOP (no disc) mode, pres STOP button on the player, a "1" & "2" button on the remo control unit. Press STOP or PLAY button.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	The value denotes the current in decimal notation. The above example shows the initial current is 25mA and the measured value is 22mA.	In STOP (no disc) mode, pres STOP button on the player, a "3" button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button or remote control unit for next page (FL Display).

Item		FL Display	Key Operation
Mode Name	Description		Remote Control Key
Device Name	Display the device name.	1. 2. 3.	In STOP (no disc) mode, pres STOP button on the player, a "4" button on the remote control unit. *With pointing o cursor up and down on displ Cancelled automatically 5 seconds later. To exit, press [POWER] butt on main unit or remote contr
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retired to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	 Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	In STOP (no disc) mode, pres STOP button on the player, a "5" button on the remote control unit. Press STOP or OPEN button exit. Press "FL DISPLAY" button remote control unit for next page (FL Display).
Region display	Region display & mode		In STOP (no disc) mode, pres STOP button on the player, a "6" button on the remote control unit. Cancelled automatically 5 seconds later.
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display.		In STOP (no disc) mode, pres STOP button on the player, a "7" button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button or remote control unit for next page. (FL Display)

Item		FL Display	Key Operation
Mode Name	Description		Remote Control Key
DVD module firmware version display	DVD module firmware version display is on the FL Display.		In STOP (no disc) mode, pres STOP button on the player, a "8" button on the remote control unit. Cancelled automatically 5 seconds later.
Initialization	Initialization. User settings are cancelled and player is initialized to factory setting.		In STOP (no disc) mode, pres STOP button on the player, a button on the remote control unit.
DVD Module Reset	To reset DVD Module.		In initialisation, press and ho STOP button on the player followed by "Enter" button o the remote control. Cancelled automatically 5 seconds later.
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	 The value denotes the current in decimal notation. The above example shows the initial current is 20mA and the measured value is 20mA.	In STOP (no disc) mode, pres STOP button on the player, a FUNCTIONS button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button or remote control unit for next page (FL Display) on values DVD drive current.
Communic-ation error display	Displays frequency of communication errors between system control IC and mechanism control IC during DVD module.		In STOP (no disc) mode, pres STOP button on the player, a "MENU" button on the remot control unit. Cancelled automatically 5 seconds later.

Item		FL Display	Key Operation
Mode Name	Description		Remote Control Key
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for each of DVD laser and CD laser is separately saved in the EEPROM IC.	 The value denotes the current in decimal notation. The above example shows the initial current 20mA and 23mA for DVD laser and CD laser respectively when the laser is switched on.	In STOP (no disc) mode, pres STOP button on the player, a PAUSE button on the remote control unit. Cancelled automatically 5 seconds later. Press “FL Display” button or remote control unit for next page (FL Display) on values laser drive current.
ECC error display	ECC decode error display.		In STOP (no disc) mode, pres STOP button on the player, a TOP MENU button on the remote control unit. Cancelled automatically 5 seconds later. Press “FL Display” button or remote control unit for next page (FL Display) on values laser drive current.
Time 1 check	Timer 1 check. Laser operation time. Press “FL Display” button for next page of FL Display (to show CD laser time).	 Shown to the left is laser time, and to the right laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. “0000” will follow “9999”.	In STOP (no disc) mode, pres STOP button on the player, a “ ” button on the remot control unit. Cancelled automatically 5 seconds later. Press “FL Display” button or remote control unit for next page (FL Display) on values laser drive current.
Timer 1 reset	Timer 1 reset. Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000/0000 (display1/display2)	While display Timer 1 data, press STOP button on the player, and “ “ button o the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 check	Timer 2 check. Spindle motor operation timer. Press “FL Display” button for next page of FL Display.	Time is shown in 5 digits of decimal notation in a unit of 10 hours. “0000” will follow “9999”.	In STOP (no disc) mode, pres STOP button on the player, a “ “ button on the remot control unit. Cancelled automatically 5 seconds later.

Item		FL Display	Key Operation
Mode Name	Description		Remote Control Key
Timer 2 reset	Timer 2 reset. Spindle motor operation timer.		While display Timer 2 data, press STOP button on the player, and “ “ button o the remote control unit. Cancelled automatically 5 seconds later.

10.2.2. DVD Self-Diagnostic Function Error Code

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F010	DVD Media disk	A specification value is size from the PARENTAL LOCK value of the appointed country.		Press [on main unit for ne error.
F020	DVD Media disk	There is no TT_SRPT. (RLBN is 0).		Press [on main unit for ne error.
F021	DVD Media disk	The number of TT_SRP is 0.		Press [on main unit for ne error.
F022	DVD Media disk	A specification value. It is size from the number of TT_SRP.		Press [on main unit for ne error.
F023	DVD Media disk	VTSN or in agreement with VTS_TTN. There is no SRP.		Press [on main unit for ne error.
F024	DVD Media disk	A specification value. It is size from TT_SRP. PTT_Ns		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F030	DVD Media disk	The number of TTU_SRP is 0.		Press [on main unit for ne error.
F031	DVD Media disk	A specification value. It is size from the number of TTU_SRP.		Press [on main unit for ne error.
F040	DVD Media disk	The number of SRP1 is 0.		Press [on main unit for ne error.
F041	DVD Media disk	The number of PGCI_SRP is 0.		Press [on main unit for ne error.
F042	DVD Media disk	A specification value. It is size from the number of PGCI_SRP.		Press [on main unit for ne error.
F043	DVD Media disk	It is in agreement with Menu ID. There is no PGCI_SRP.		Press [on main unit for ne error.
F050	DVD Media disk	The number of TMAP_SRP is 0.		Press [on main unit for ne error.
F051	DVD Media disk	A specification value. It is size from the number of TMAP_SRP.		Press [on main unit for ne error.
F052	DVD Media disk	Specification TMAP_SA is 0.		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F053	DVD Media disk	The number of MAP_EN is 0.		Press [on main unit for ne error.
F060	DVD Media disk	Although C_POSIT exists, it is in PGC. There is no PGMAP.		Press [on main unit for ne error.
F061	DVD Media disk	Although C_POSIT exists, it is in PGC. There is no PGMAP.		Press [on main unit for ne error.
F062	DVD Media disk	A specification value inside of PGC. It is size from the number of PGes.		Press [on main unit for ne error.
F063	DVD Media disk	Although C_POSIT exists, it is in PGC. There is no C_PBIT.		Press [on main unit for ne error.
F064	DVD Media disk	Although C_POSIT exists, it is in PGC. The number of PGes is 0.		Press [on main unit for ne error.
F065	DVD Media disk	Specification A cell number is 0.‘		Press [on main unit for ne error.
F066	DVD Media disk	A specification value inside of PGC. It is size from the number of Cell(s).		Press [on main unit for ne error.
F067	DVD Media disk	A blocked cell is present.		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F070	DVD Media disk	There is no NV_PACK data.		Press [on main unit for ne error.
F080	DVD Media disk	Under reference. There is no Cell number.		Press [on main unit for ne error.
F0E0	DVD Media disk	For [used as a DFD object] a user guide. A PGC control file < impossible.		Press [on main unit for ne error.
F0E1	DVD Media disk	DFD main microcomputer. Compatibility with a DFD type < download is impossible.		Press [on main unit for ne error.
F0E2	DVD Media disk	DFD download start. PGC reproduction error.		Press [on main unit for ne error.
F0E3	DVD Media disk	Waiting for the completion of DFD download. PGC reproduction error.		Press [on main unit for ne error.
F0E4	DVD Media disk	At the time of DFD download AVDEC.		Press [on main unit for ne error.
F0E5	DVD Media disk	It is the farm file lead error at the time of DFD download.		Press [on main unit for ne error.
F0E6	DVD Media disk	DFD alteration check error of the read firmware.		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F0F0	DVD Media disk	There is no farm file used as a DFD object and it is downloading needlessly.		Press [on main unit for ne error.
F0F1	DVD Media disk	The firware which is in agreement with DFD download conditions < unnecessary.		Press [on main unit for ne error.
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display		Press [on main unit for ne error.
F4FF	Force initialize failure (time out)	Timeout when force initialization fails		Press [on main unit for ne error.
F500	DSC error	DSC (IC8251) stops in the occurrence of servo error (startup, focus error, etc.)		Press [on main unit for ne error.
F501	DSC not Ready error	DSC-system computer communication error (Communication failure caused by idling of DSC)		Press [on main unit for ne error.
F502	DSC Time out error	Similar as F500		Press [on main unit for ne error.
F503	DSC communication Failure	Communication error (result error occurred although communication command was sent)		Press [on main unit for ne error.
F504	Abnormal adjusting DSC data slice offset			Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F505	DSC Attention error	Similar as F500		Press [on main unit for ne error.
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc media		Press [on main unit for ne error.
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect		Press [on main unit for ne error.
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data		Press [on main unit for ne error.
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable		Press [on main unit for ne error.
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc		Press [on main unit for ne error.
F610	ODC abnormality	No permission for command execution		Press [on main unit for ne error.
F611	No CRC OK for a specific time (CD)	Access failure to seek address in CD series		Press [on main unit for ne error.
F612	No CRC OK for a specific time (DVD)	Access failure to ID data in DVD series		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F620	Laser safeguard: high temperature condition	High temperature of the laser guide unit (OPU unit)		Press [on main unit for ne error.
F621	Laser safeguard: circuit failure condition	Circuitry failure of the laser guide unit (OPU unit)		Press [on main unit for ne error.
F700	MBX overflow	When replying message to disc manager		Press [on main unit for ne error.
F701	Message command does not end	Next message is sent before replying to disc manager		Press [on main unit for ne error.
F702	Message command changes	Message is changed before it is sent as a reply to disc manager		Press [on main unit for ne error.
F880	Task number is not appropriate	Message coming from a non-existing task		Press [on main unit for ne error.
F890	Sending message when message is being sent to AV task	Sending message to AV task		Press [on main unit for ne error.
F891	Message couldn’t be sent to AV task	Begin sending message to AV task		Press [on main unit for ne error.
F893	FLASH ROM IC problem	FLASH ROM IC installed is not operating properly (Neccessary replacement of FLASH ROM IC) or firmware problem		Press [on main unit for ne error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F894	EEPROM abnormality	EEPROM IC installed is not operating in normal condition (EEPROM contains neccessary data)		Press [on main unit for ne error.
F895	Region setting abnormality	Firm version agreement check for factory preset setting failure prevention. Check region setting & re-initialize		Press [on main unit for ne error.
F896	No existence model	Firm version agreement check for factory preset setting failure prevention		Press [on main unit for ne error.
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention		Press [on main unit for ne error.
F898	Disagreement of hardware and software	Unsuitable combination of AV DECORDER, SDRAM and FLASH ROM (firmware)		Press [on main unit for ne error.
F8A0	Message command is not appropriate	Begin sending message to AV task		Press [on main unit for ne error.

Note:

An error code will be canceled if a power supply is turned OFF.

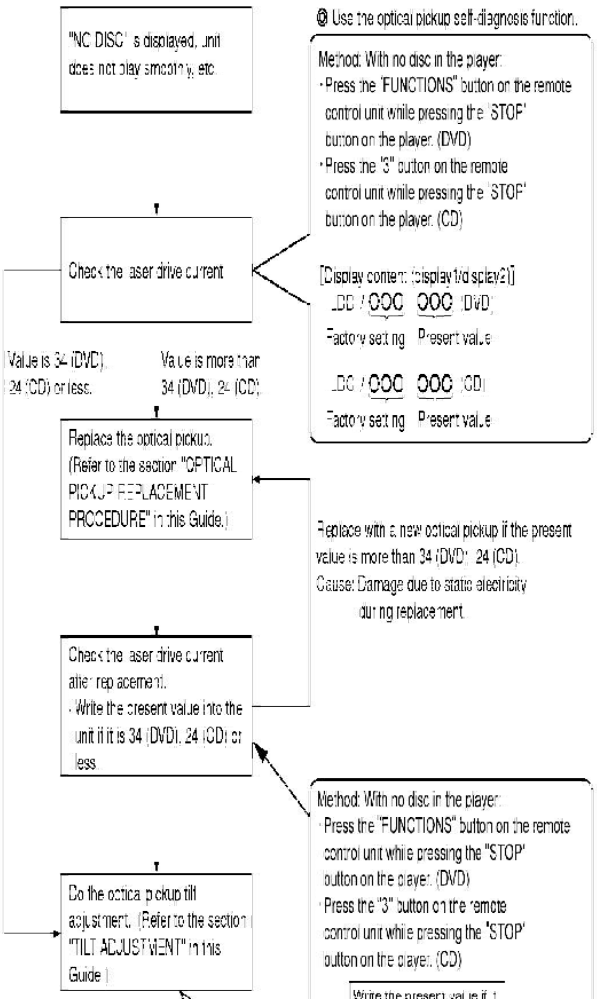
***1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.**

10.2.3. Optical Pickup Breakdown Diagnosis

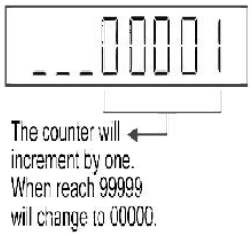
This unit is equipped with the optical pickup self-diagnosis function and the tilt adjustment check function. Follow the procedure described below during repair in order to perform self-diagnosis and tilt adjustment effectively. Especially when "NO DISC" is displayed, be sure to apply the self-diagnosis function before replacing with an optical pickup. Replacement of optical pickup generally requires when the present value of laser drive exceeds 45 (DVD) or 45 (CD).

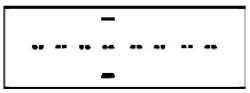
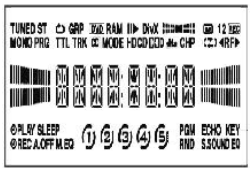
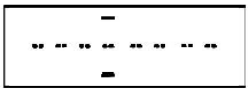
Note:

Start diagnosis within three minutes after turning on the power (as diagnosis fails when the unit becomes warm).


"NC DISC" is displayed, unit does not play smoothly, etc.
Check the laser drive current
Value is 34 (DVD), 24 (CD) or less.
Value is more than 34 (DVD), 24 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Check the laser drive current after replacement.
- Write the present value into the unit if it is 34 (DVD), 24 (CD) or less.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the optical pickup self-diagnosis function.
Method: With no disc in the player:
- Press the "FUNCTIONS" button on the remote control unit while pressing the "STOP" button on the player. (DVD)
- Press the "3" button on the remote control unit while pressing the "STOP" button on the player. (CD)
[Display content: (display1/display2)]
LDD / CCC CCC (DVD)
Factory setting Present value
LDD / CCC CCC (CD)
Factory setting Present value
Replace with a new optical pickup if the present value is more than 34 (DVD), 24 (CD).
Cause: Damage due to static electricity during replacement.
Method: With no disc in the player:
- Press the "FUNCTIONS" button on the remote control unit while pressing the "STOP" button on the player. (DVD)
- Press the "3" button on the remote control unit while pressing the "STOP" button on the player. (CD)
Write the present value if it

10.3. Special Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self - Diagnostic Mode	To enter into self diagnostic checking for main unit.		1. Select [for DVD/CD mode. Ensure no disc is inserted. 2. Press and hold [button for 2 seconds follow by [ ]. To exit, press button on main unit or remote control.
CD Changer Reliability Test (CRS1D)	To determine the reliability of CD/ DVD Changer Unit. (For more information, refer to section 10.3.1)		In Self-Diagnostic Mode: 1. Select [for CD mode. 2. Press [1] on remote control.. To exit, press button on main unit or remote control. (The tray will return to PLAY position and then power off)
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version.	Below is various steps of display when enter into doctor mode: 1. FL display will be light for 1 second. 2. It enters into doctor mode: 3. The checksum for EEPROM IC & firmware will be display	In CD/DVD or Tape mode: 1. Press [ ] butto on main unit follow by [4] and [7] on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control. Refer to Section 10.3.1 on information of EEPROM checksur ROM correction.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Cold Start	Initialize backup data and start.		In doctor mode: 1. Press [4] on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
FL Display Test	To check the FL segments display (All segments will light up and LED will blink at 0.5 second interval)		In doctor mode: 1. Press [PLAY/REC] button on remote control
Tape Eject Test	To check on the tape eject function (For deck 1/2)		In tape after entering doctor mod 1. Press [0] button on remote control.
Software Version and EEPROM Information Display	Execute Software Version and EEPROM checksum display for the microcontroller.	1. 2. Note: There is no EEPROM IC install. 3.	In doctor mode: 1. Press [ ] butto on main unit follow by [4] and [7] on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
Firmware Version checking	Execute Firmware Version checking display.		In doctor mode: 1. Press [ ] butto on main unit follow by [CANCEL] on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.

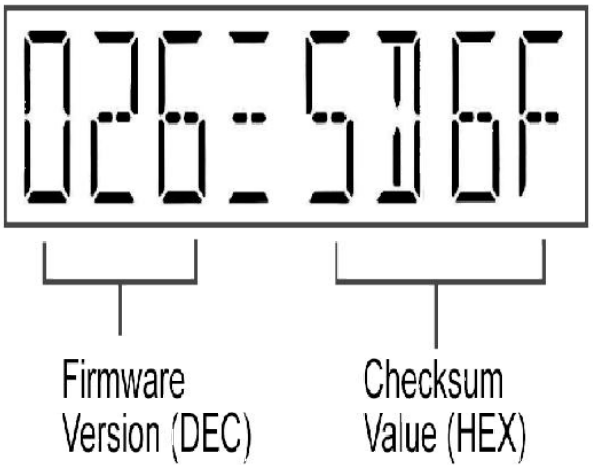
10.3.1. EEPROM Checksum (ROM Correction)

Purpose: To check for microprocessor firmware version and EEPROM checksum (ROM correction).

Below are the procedures for this mode.
Step 1: Enter into Doctor mode (for more information, refer to section 10.3 on key operations to enter into this mode.
Step 2: Check for firmware version and EEPROM checksum (By pressing STOP button on main unit followed by "4" and "7" on remote control).

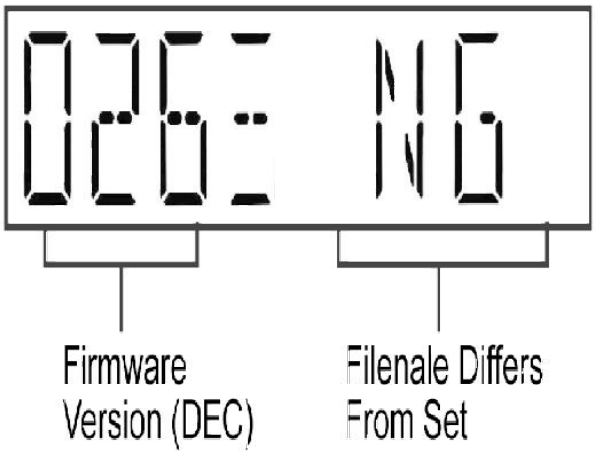
- When entering into DOCTOR MODE, the firmware version and checksum of EEPROM (if applicable) will appear on FL display. Below is the information on the EEPROM IC (ROM correction) under 3 possible situations:

1. In the case that the correction point existence data is other than 0 (ie. correction file exists), EEPROM checksum display for the microprocessor shall be made after calculating checksum by summing up the content of data area from EEPROM.



2. In the case that the correction point existence data is 0, [NO] shall be displated.

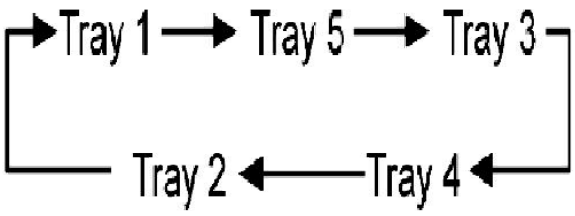
3. In cases that the filename is different even though a EEPROM is set, or no correction file exists, [NG] shall be displayed (the correction point existence data is set to 0 at this condition).



Note: Microprocessor firmware refers to version number for microprocessor IC. It is subject to change which would be updated accordingly. ROM correction checksum refers to the HEX code that is displayed upon key buttons pressed if an EEPROM is loaded in the unit.

10.3.2. CD/DVD changer unit ageing test mode

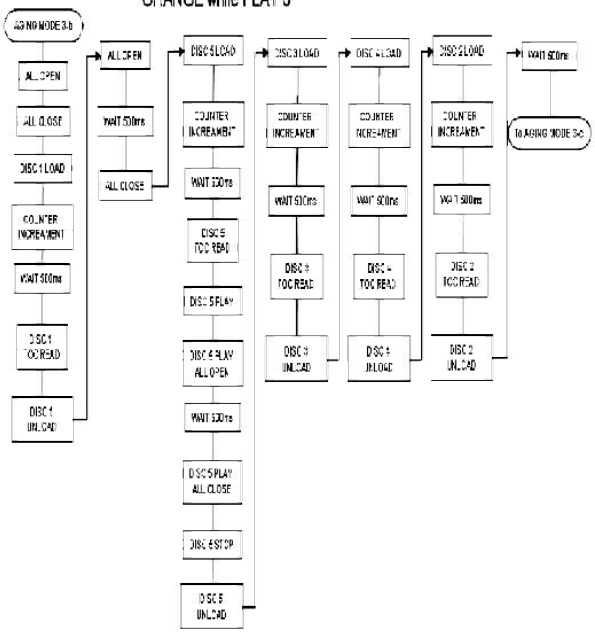
Below is the process flow chart of ageing for the CD/DVD changer unit. (CRS1D)



Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)
CHANGE while PLAY 1

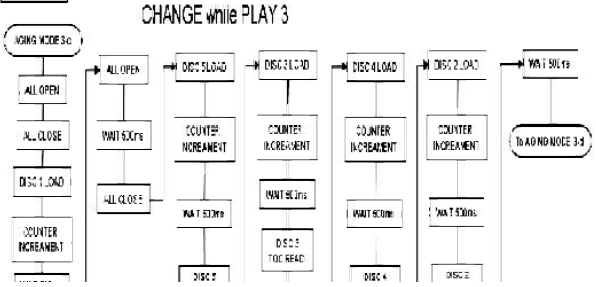
Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)

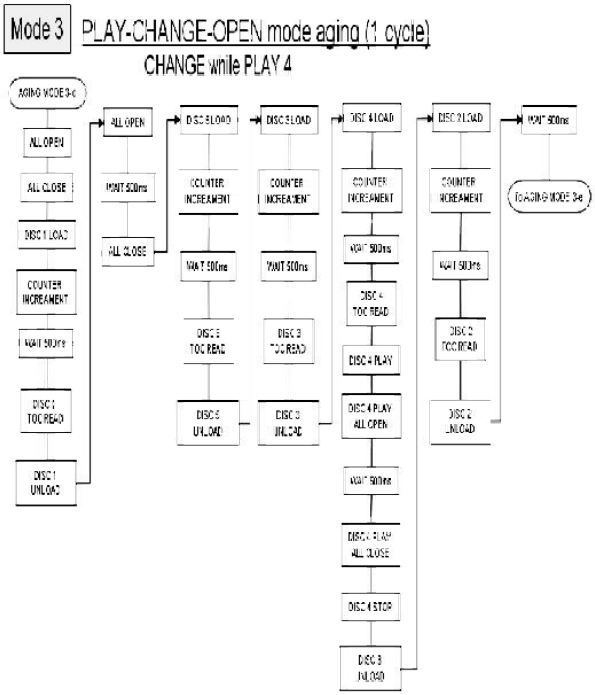
CHANGE while PLAY 5

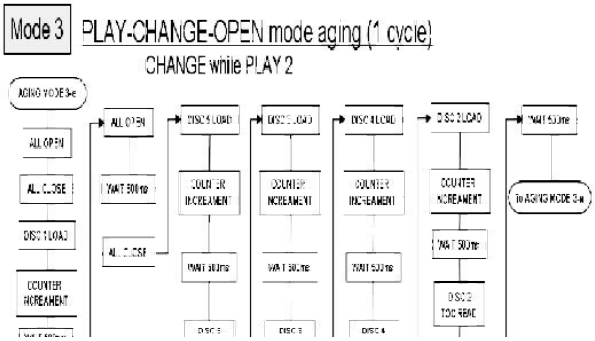


Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)

CHANGE while PLAY 3





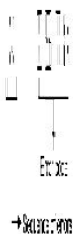
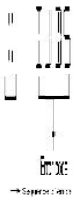


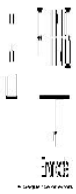
10.3.3. Error Code Table

Self-Diagnosis Function (refer Section 10.3) provides information on any problems occuring for the unit and its respective components by displaying the error codes. These error code such as U, H** and F** are stored in memory and held unless it is cleared.**

The error code is automatically display after entering into self-diagnostic mode.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Mode SW, plunger and capstan motor abnormal	The tray is not able to open.		For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
H02	Rec INH SW abnormal	(Spindle servo, DSC (IC8251) Spindle motor, CLV servo error)		For deck mechanism unit (F deck 2). Press [on main unit for next error.
H03	HALF SW abnormal	(Traverse motor, IC8251)		For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
F15	RESET SW abnormal	REST SW: ON is not detected within the specified time.		For DVD unit (For Traverse) Press [on main unit for next error.
F26	Transmission error between CD Servo LSI IC and microprocessor IC	When set to CD mode, the sense signal does not turn “Low”, a fail safe time after system command transmission is sent.		For DVD unit (For Traverse) Press [on main unit for next error.
F61	Power Amp IC output abnormal	Upon power on, PCONT=HIGH, DCDET=L after checking LSI.		For power. Press [on main unit for next error.
IHMS	Cam gear abnormality	Cam gear does not rotate to “HOME” position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
ICSL	Cam gear/gear units abnormal	Cam gear does not rotate to “PLAY” driving position and hence does not drive playing tray to “STOCK” position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
ISTK	Drive rack/gear assembly abnormal	The tray drive rack does not move to “STOCK” position. (Tray does not move to “STOCK” position)		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
IPLY	Drive rack/gear assembly abnormal	The tray drive rack does not move to “PLAY” position. (Tray does not move to “PLAY” position)		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
ITOP	UD assembly	UD Rack does not move to front direction. This lead to UD base not raise to top position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
IUDS	UD assembly	After TOP SW is detected, UD rack does not move into tray 1 position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
HOME	Cam gear/gear assembly abnormal	Cam gear does not move to “HOME” position under following conditions 1. After tray is load to “PLAY” position. 2. After tray is unload to “STOCK” position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
LOAD	Tray drive assembly abnormal	Tray unit does not move from “STOCK” to “PLAY” position		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
PDRV	Cam gear/gear assembly abnormal	Cam gear does not move from “HOME” to “PLAY” drive position.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
UDU	UD base asssembly abnormal	UD Base assembly does not move upwards from tray 5 to tray 2		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
UDD	UD base asssembly abnormal	UD Base assembly does not move downwards from tray 1 to tray 5.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
UD1	UD base asssembly abnormal	UD Base assembly does not move to tray 1.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
F1NG	Fail - safe mode. (For open /close tray unit(s))	When the tray open operation is performed, it fails to open. It will automatically close all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.
F2NG	Fail - safe mode. (For open /close tray unit(s))	When the tray close operation is performed, it fails to close. It will automatically open all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
SRVC_TRV	To unlock the traverse unit for service	1. All trays set to "STOCK" position 2. Mechanism set to tray 5 3. Cam gear set to "HOME" position		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit.
RSET	Cam gear jam/ close sensor faulty	During tray re-open, the cam gear will rotate in the opposite direction to reset the cam gear position. When it fails, the error code will appear.		For DVD/CD changer unit (CRS1D). Press [SINGLE CHANGE] or main unit for next error.

CRS1D Error Code display

1. The errors that occured in CRS1D Mechanism can be recalled and displayed, in the order of the occurence under self-diagnostic (Refer to Section 10.3 for procedures to enter this mode.

- Only the first 5 errors will be memorized (in backup memory). The subsequence error shall be ignored and not memorize.
For system with EEPROM as memory backup,memory space in EEPROM is neccesary.

2. To display all error code memorized
In CRS1D Self-Diagnostic mode, press [SINGLE CHANGE] to display subsequence error code.
It shall repeat after reaching error no. 5.
e.g.:
[1 _ _ _ _ I H M S] [SINGLE CHANGE]
[2 _ _ _ _ I T O P] [SINGLE CHANGE]
[3 _ _ _ _ H O M E] [SINGLE CHANGE]
[4 _ _ _ _ L O A D] [SINGLE CHANGE]
[5 _ _ _ _ _ U D D] [SINGLE CHANGE]

3. To clear the error code memory
In CRS1D Self-Diagnostic mode, long press [SINGLE CHANGE] key (2s or more)

11. Assembling and Disassembling

11.1. Caution

Special Note:
This model uses a new CD/DVD changer unit CRS1D. In this following section does not contain the necessary disassembly & assembly information for the CD/DVD changer unit (CRS1D) except the disasembly & assembly of traverse unit. Kindly refer to the original service manual for the CD/DVD changer unit. (Order No. MD0603065A3).

"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. / Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Refer to the Parts No. on the page of "Parts Location and Replacement Parts List" (Section 25), if necessary.**

Warning :-

This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

Caution:
After replacing of CD/DVD Changer Unit, ageing test is necessary. Please confirm operation for CD/DVD Changer Unit.

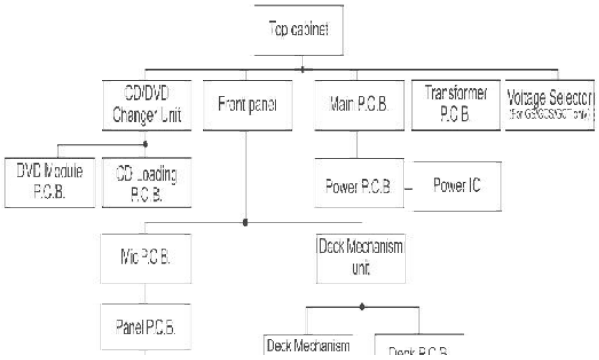
Below is the list of disassembly sections

- **Disassembly of Top Cabinet**
- **Disassembly of Rear Panel**
- **Disassembly of CD/DVD Changer Unit**
- **Disassembly of Main P.C.B.**

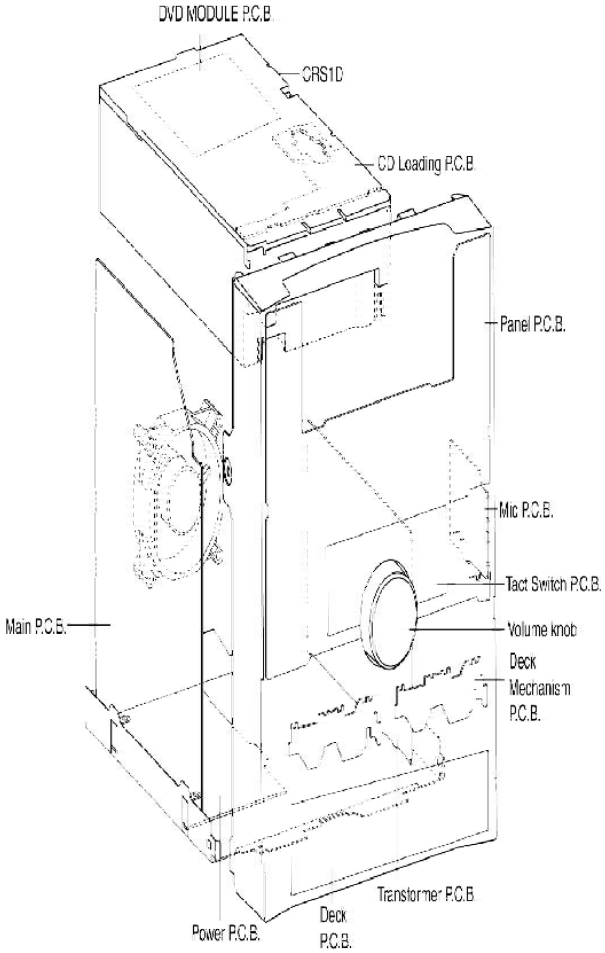
- Disassembly of Transformer P.C.B.
- Disassembly of Power P.C.B.
- Disassembly of Front Panel Unit
- Disassembly of Panel P.C.B., Mic P.C.B. & Tact Switch P.C.B.
- Disassembly of Deck Mechanism Unit
- Disassembly for Deck P.C.B.
- Disassembly of Traverse Unit
- Disassembly of Optical Pickup Unit (DVD Mechanism)
- Disassembly of Deck Mechanism
- Replacement for cassette lid
- Rectification for tape jam problem

11.2. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart as below.



11.3. Main Parts Location



11.4. Disassembly of Top Cabinet

Step 1 Remove 3 screws at each side and 5 screws at rear panel.

Step 2 Lift up both sides of the top cabinet, push the top cabinet towards the rear to remove the top cabinet.

11.5. Disassembly of Rear Panel

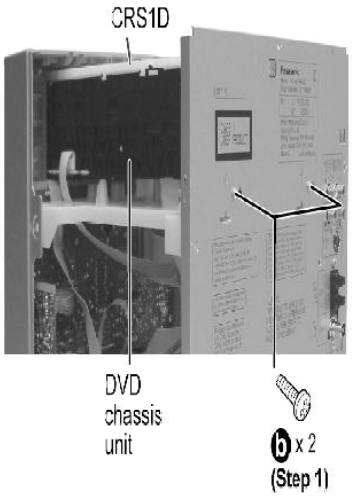
- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

Step 1 Remove 10 screws (For GS/GCS/GCT).
Remove 8 screws (For GC & GN).
Step 2 Remove rear panel.
Note:
Voltage selector is exist for GS/GCS/GCT only.

11.6. Disassembly of CD/DVD Changer Unit (CRS1D)

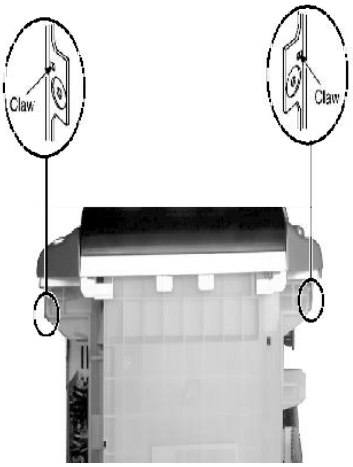
- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

Step 1 Remove 2 screws at rear panel.



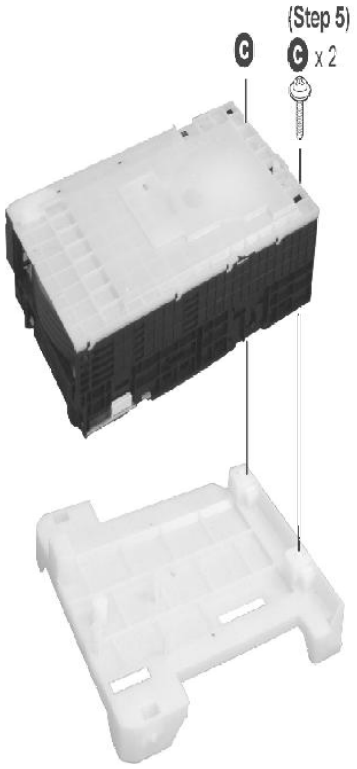
Step 2 Detach the FFC cables (CN2801 & CN2805).

Step 3 Release the claws on both ends.



Step 4 Lift the CD/DVD changer unit upwards to remove it.

- Disassembly of Mecha Chassis

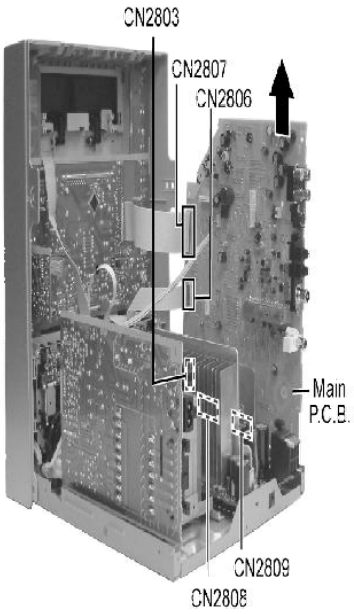


Step 5 Remove 2 screws.
Step 6 Remove the Mecha Chassis.
Note:
For disassembly & assembly of traverse unit, please refer to Section 11.4 of this service manual. Please refer to original Service Manual for the Assembling and Disassembling Procedures of the CD/DVD Changer Unit (CRS1D), in Section 5.

11.7. Disassembly of Main P.C.B.

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet
- Follow the (Step 1) - (Step 3) of Item 11.5 - Disassembly of Rear Panel
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

Step 1 Disconnect FFC cables (CN2803, CN2806 and CN2807). Disconnect wire M2 from CN5955

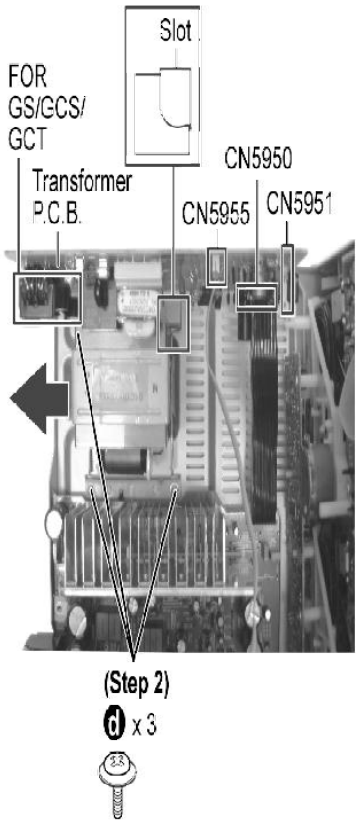


Step 2 Detach connectors (CN2808 & CN2809).
Step 3 Remove Main P.C.B.

11.8. Disassembly of Transformer P.C.B.

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet
- Follow the (Step 1) - (Step 3) of Item 11.5 - Disassembly of Rear Panel
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

Step 1 Disconnect connectors (CN5950, CN5951 & CN5955).
Step 2 Remove 3 screws (Mounting screws for transformer to bottom chassis).



Step 3 Push the Transformer P.C.B. sidewards to remove it.

11.9. Disassembly of Power P.C.B.

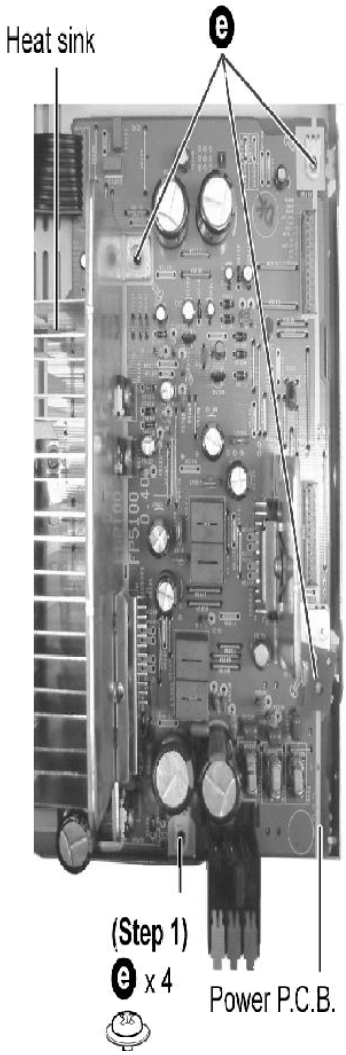
- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

- Follow the (Step 1) - (Step 3) of Item 11.5 - Disassembly of Rear Panel

- Follow the (Step 1) - (Step 3) of Item 11.7 - Disassembly of Main P.C.B.

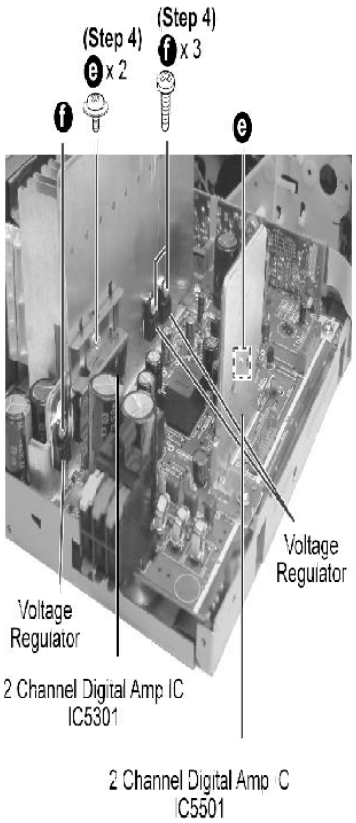
Step 1 Remove the 4 screws on Power P.C.B..



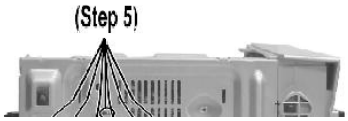
Step 2 Detach cable connected to CN5950 on Transformer P.C.B.
Step 3 Remove Power P.C.B..
Note:
Insulate the Power P.C.B. with insulating material to avoid short circuit.

- Replacement of the Power Amp IC or Voltage Regulator

Step 4 Remove 2 screws at the Power Amp ICs and/or 3 screws to Voltage Regulators.



Step 5 Cut the joints with a metal cutter as shown below.



Step 6 Desolder the terminals to replace the components.

Step 7 Fix back the cut portion with a screw as shown.

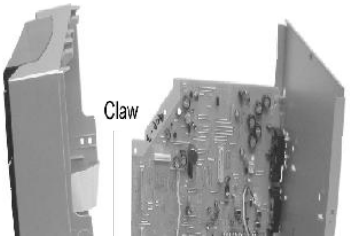
11.10. Disassembly of Front Panel Unit

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

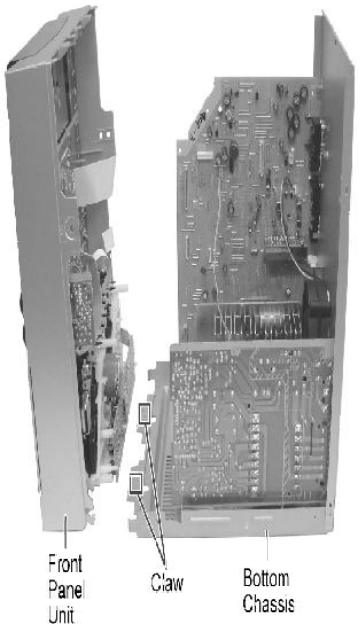
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

Step 1 Disconnect connectors (CN2803, CN2806, CN2807 & CN5951).

Step 2 Bent the front panel unit slightly forward as shown.



Step 3 Release 2 claws outwards.



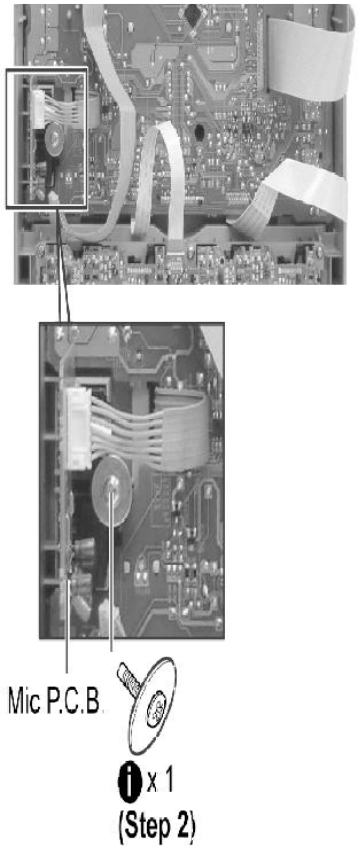
Step 4 Remove the front panel unit.

Note: Ensure 2 claws located at the bottom chassis is seated into the 2 slots at bottom of front panel at 2 catches (one on each side) of bottom chassis to be aligned to front panel's slot. Assembly is secured upon hearing clicking sound.

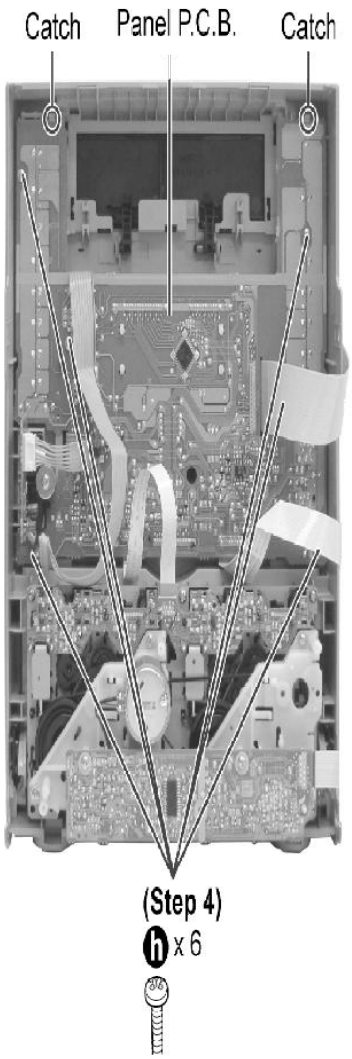
11.11. Disassembly for Panel P.C.B. , Mic P.C.B. & Tact Switch P.C.B.

- **Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet**
- **Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit**
- **Follow the (Step 1) - (Step 4) of Item 11.10 - Disassembly of Front Panel Unit**

Step 1 Remove the Volume knob.



Step 2 Remove 1 screw.
Step 3 Lift up the Mic P.C.B to remove it.
Step 4 Remove 6 screws.



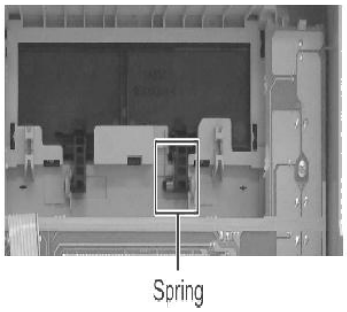
Step 5 Release 2 catches.
Step 6 Remove Panel P.C.B..

11.11.1. Disassembly of Tact Switch P.C.B.

Step 7 Remove 6 screws..

11.11.2. Disassembly of Lid

Step 1 Lift the spring sideward.

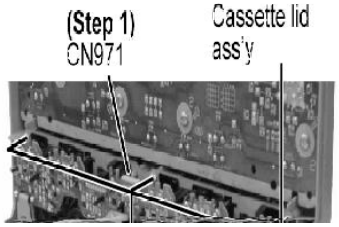


Step 2 Remove Lid.
Note: Do not misplace the spring.

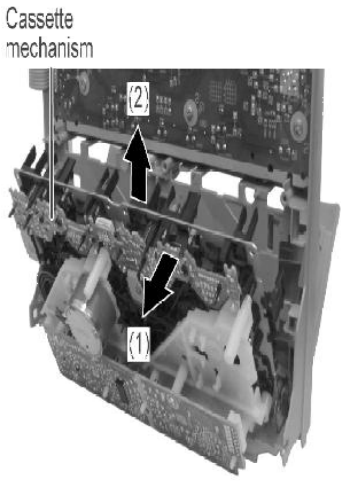
11.12. Disassembly of Deck mechanism unit

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit
- Follow the (Step 1) - (Step 4) of Item 11.10 - Disassembly of Front Panel Unit

Step 1 Detach FFC cable (CN971).
Step 2 Disconnect FFC cable (CN1001).
Step 3 Remove the 5 screws.



Step 4 Push the lever upward, and then open the cassette lid ass'y (For DECK1 and DECK2).

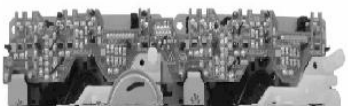


Step 5 Tilt the cassette mechanism unit in the direction of arrow (1), and then remove it in the direction of arrow (2).
Note: For disassembly of parts for deck mechanism unit, refer to Section 11.16.

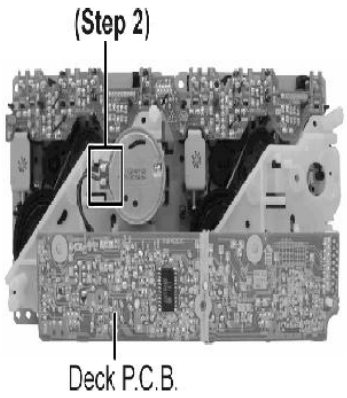
11.13. Disassembly of Deck P.C.B.

- **Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet**
- **Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit**
- **Follow the (Step 1) - (Step 4) of Item 11.10 - Disassembly of Front Panel Unit**

Step 1 Remove 2 screws.



Step 2 Desolder wire at deck motor terminals (W1002).



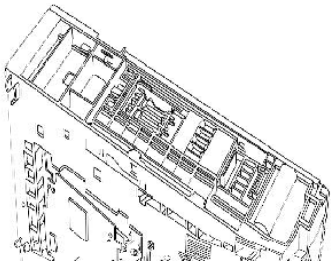
Step 3 Remove Deck P.C.B.

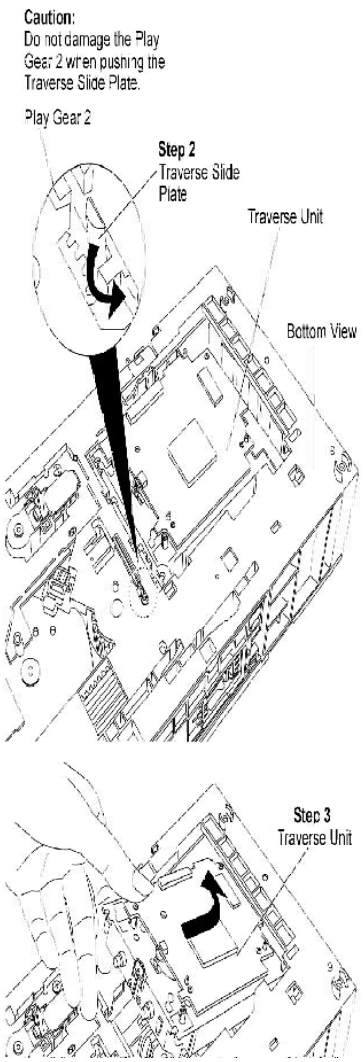
11.14. Disassembly of Traverse Unit

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

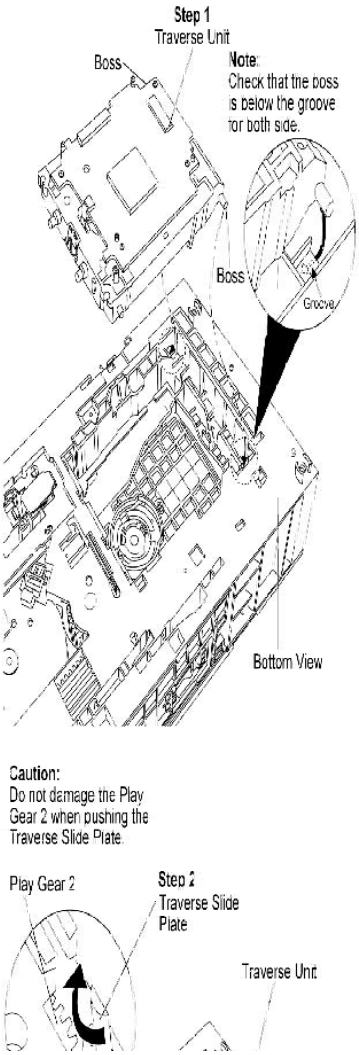
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

Important notes: Ensure all the trays are in the "STOCK" position before proceeding to the disassemble of traverse unit. For procedures to set the trays in "STOCK" position, please refer to original Service Manual for CRS1D, Section 4.3. Setting the trays in "STOCK" position, Order No. MD0603065A3.





- Assembly of Traverse Unit



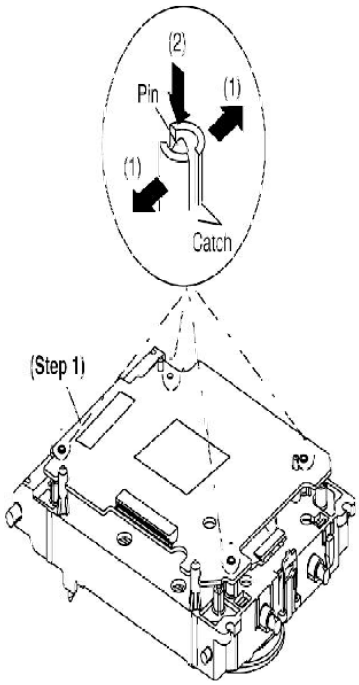
11.15. Disassembly of optical pickup unit (DVD mechanism)

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

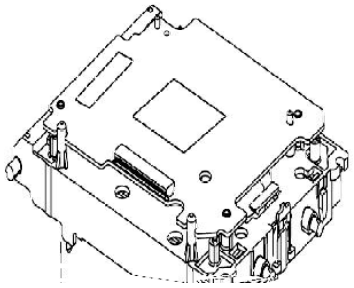
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

- Follow the (Step 1) - (Step 2) of Item 11.14 - Disassembly of Traverse Unit

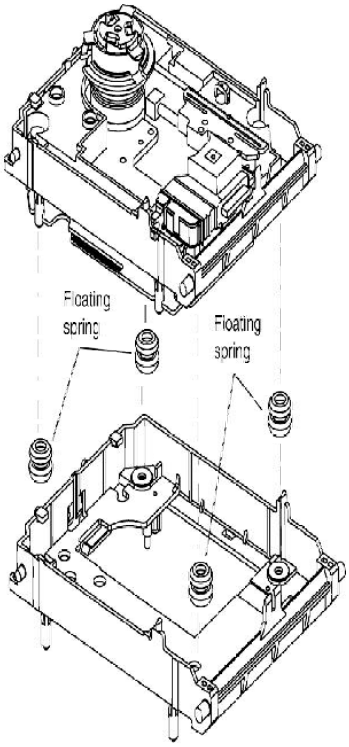
Step 1 Pull out FFC.



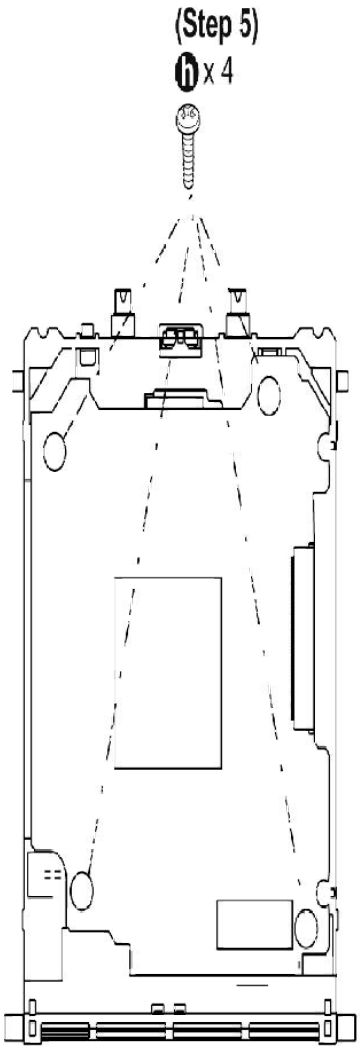
Step 2 Widening the catch, push the pin in.



Step 3 Remove 4 pins.

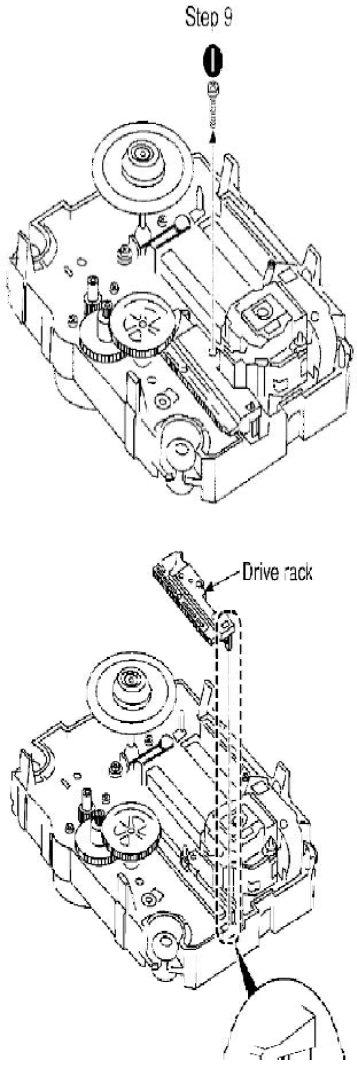


Step 4 Remove the traverse deck.
Note: As floating springs (4 pieces) come off at the same time, be careful not to lose them.

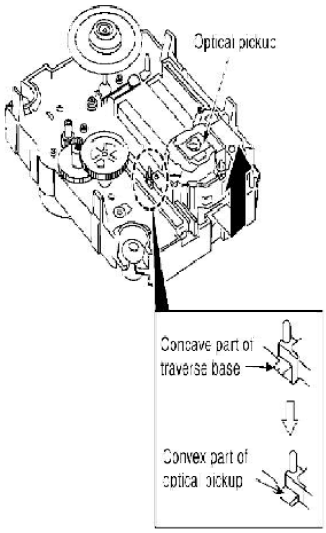


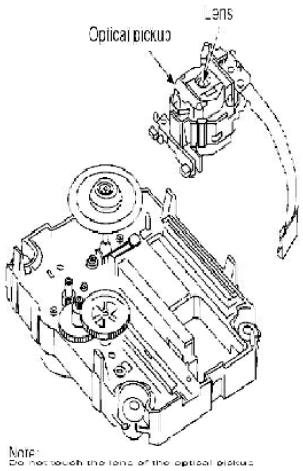
Step 5 Remove 4 screws.
Step 6 Remove the DVD Servo P.C.B. and turn it over.
Note: Insert a short pin into FFC of the optical pickup.
Step 7 Rotate the traverse deck (B) to the arrow direction and shift the optical pickup to the furthest backward.

Step 8 Remove the catch of the drive rack, and take out the drive rack.



Step 9 Place the convex part of an optical pickup to the concave part of a traverse base, then take out the optical pickup.





11.16. Disassembly of Deck Mechanism

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

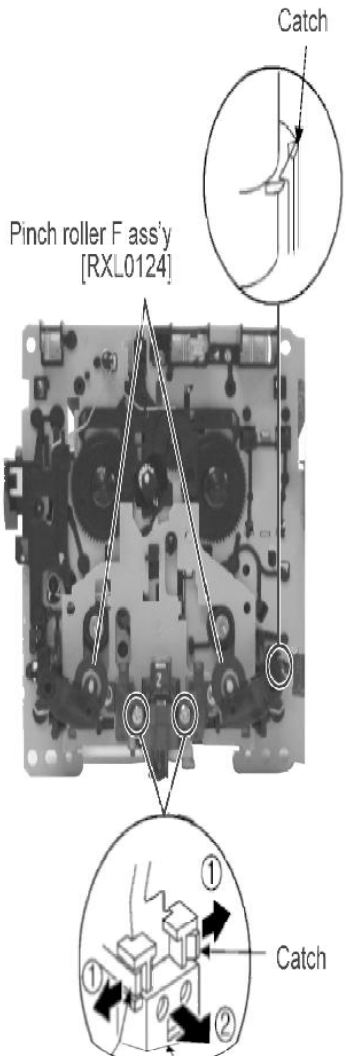
- Follow the (Step 1) - (Step 4) of Item 11.6 - Disassembly of CD/DVD Changer Unit

- Follow the (Step 1) - (Step 4) of Item 11.10 - Disassembly of Front Panel Unit

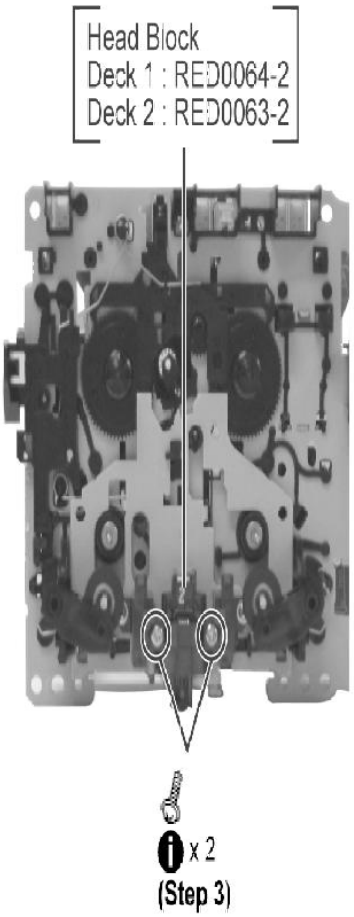
- Follow the (Step 1) - (Step 5) of Item 11.12 - Disassembly of Deck Mechanism Unit

11.16.1. Disassembly of the pinch roller ass'y and head block

*** The mechanism as shown below is for DECK1. For DECK 2, perform the same procedures.**



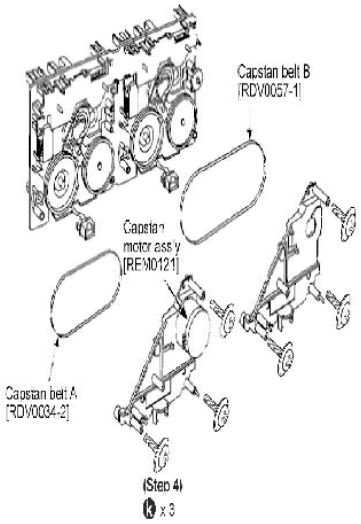
Step 1 Release the catch, and then remove the pinch roller (F).
Step 2 Release 2 claws and detach the head block connector.



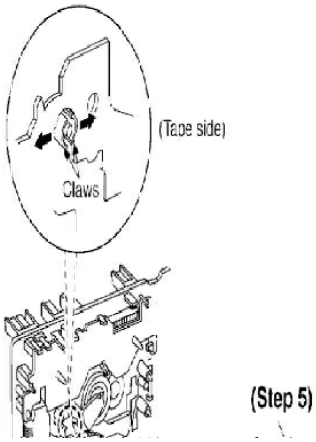
Step 3 Remove 2 screws.
Step 4 Remove head block.

11.16.2. Disassembly of capstan motor ass'y, capstan belt A, capstan belt B and winding belt

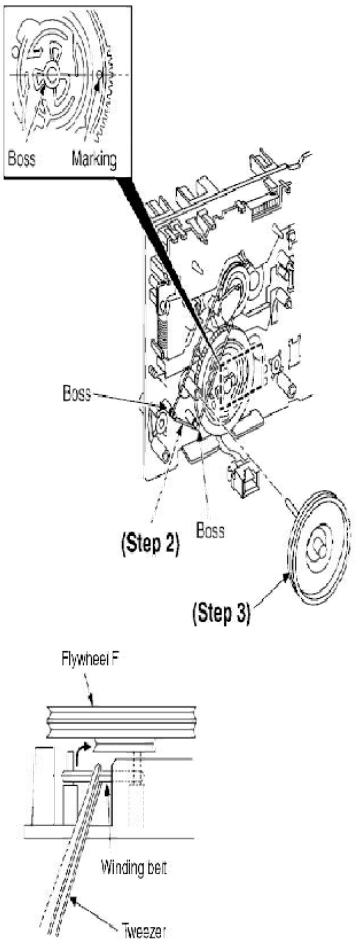
Step 1 Detach the head block connector (Deck P.C.B.).
Step 2 Desolder wire(W1002) at motor assembly.
Step 3 Remove Deck P.C.B.



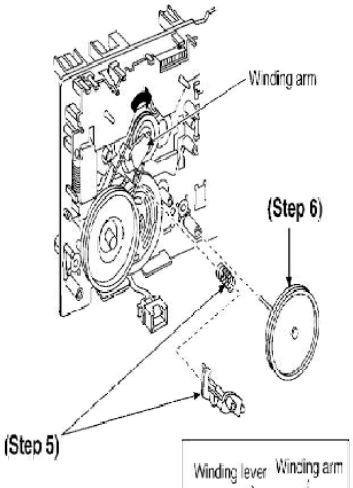
Step 4 Remove 3 screws (for deck 1 & 2).
Step 5 Remove capstan belt A/B.

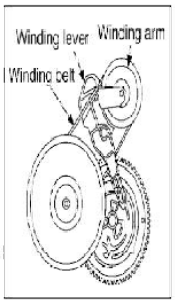


Step 6 Remove the flywheel R.
Step 7 Release the claw and remove the winding lever and spring.
[Installation of the belt]
Step 1 The boss and marking should be positioned horizontally.



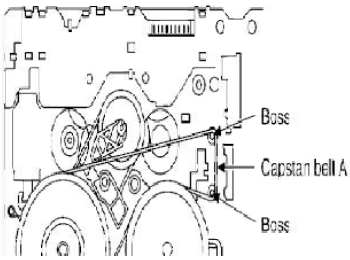
Step 2 Put the winding belt on the pulley temporarily.
Step 3 Install the flywheel F.
Step 4 Put the winding belt on the flywheel F.
Step 5 Install the winding lever and spring while pressing the winding arm in the direction of arrow.
Step 6 Install the flywheel R.



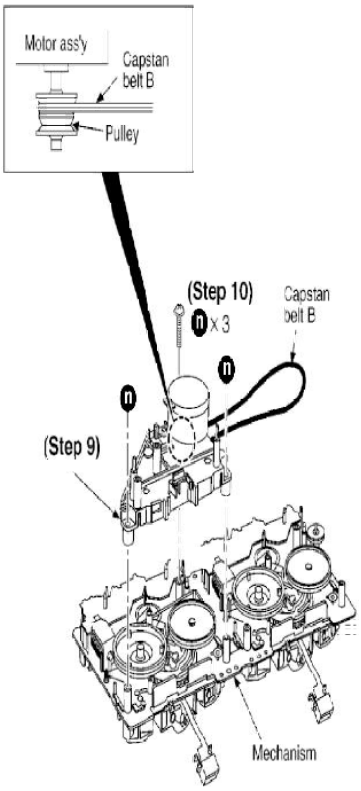


NOTE:
The winding lever should be positioned as shown below.

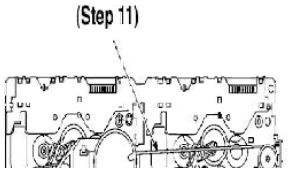
Step 7 Put the capstan belt A temporarily as shown below.



Step 8 Put the capstan belt B on the motor ass'y pulley.
Step 9 Install the sub chassis to the mechanism, and then tighten screws.



Step 10 Install 3 screws.
Step 11 Put the capstan belt B as shown below.

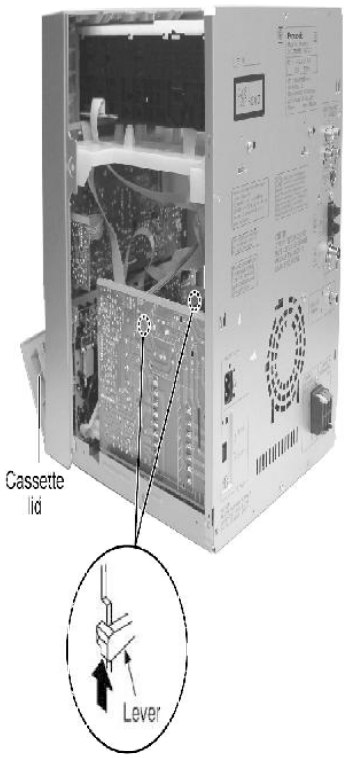


Step 12 Put the capstan belt A on the motor ass'y pulley.

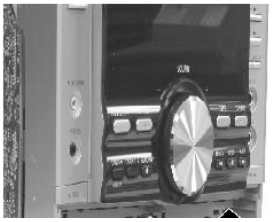
11.17. Replacement for cassette lid

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

Step 1 Lift up the lever upward, open the cassette deck. (For DECK1 and DECK2)



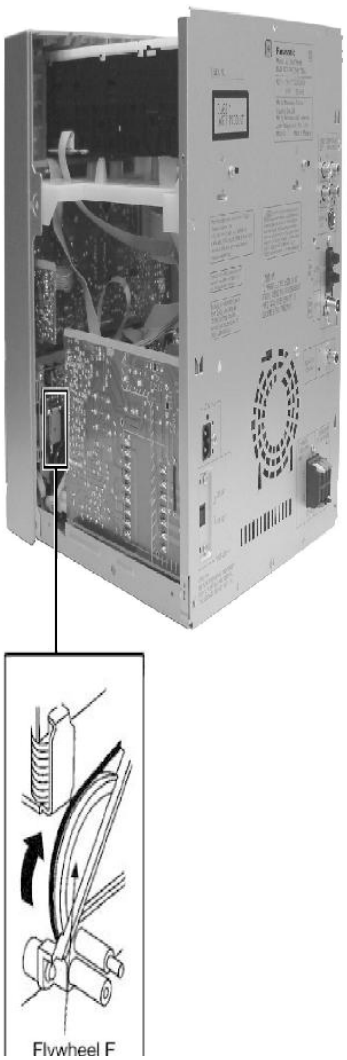
Step 2 Push up the cassette lid (L/R) in the direction of arrow. (For DECK1 and DECK2).



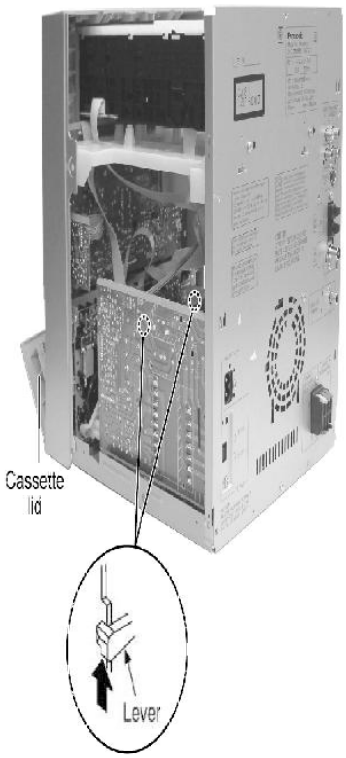
11.18. Rectification for tape jam problem

- Follow the (Step 1) - (Step 2) of Item 11.4 - Disassembly of Top Cabinet

Step 1 If a cassette tape cannot be removed from the deck (the tape is caught by the capstan or pinch roller during playback or recording), rotate the flywheel F in the direction of the arrow to remove it.



Step 2 Push the lever upward and open the cassette lid. Remove the cassette tape.



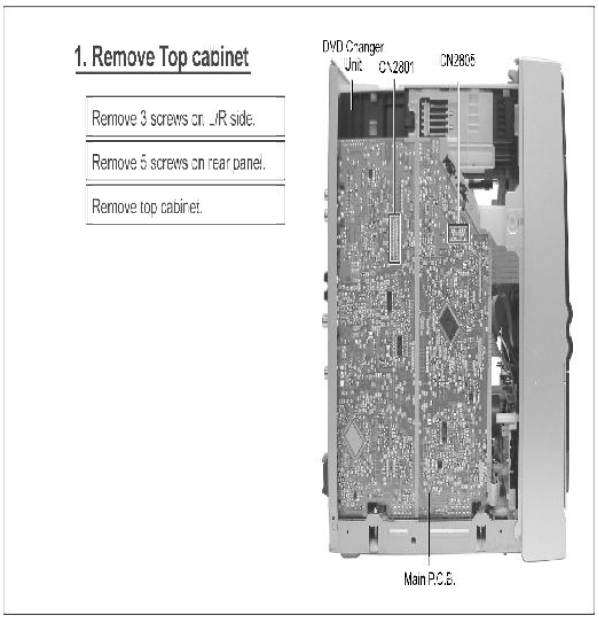
12. Service Fixture and Tools

Service Tools	
Extension FFC	
(A) Deck P.C.B. - Main P.C.B.	**REEX0485 (14 Pins)**
(B) Panel P.C.B. - Deck Mechanism P.C.B.	**REEX0484 (10 Pins)**

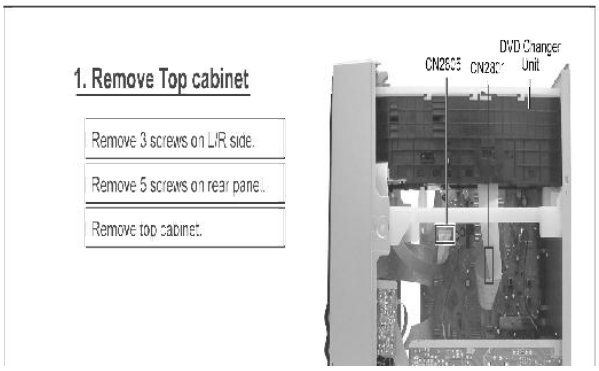
13. Service Positions

Note: For description of the disassembly procedures, see the Section 11.

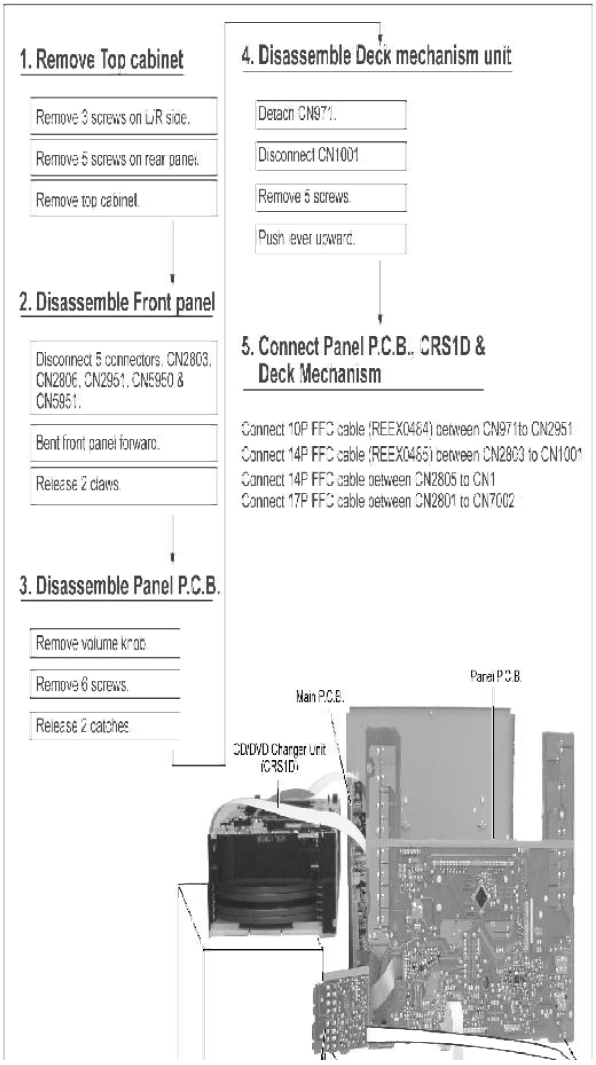
13.1. Checking and Repairing of Main P.C.B.



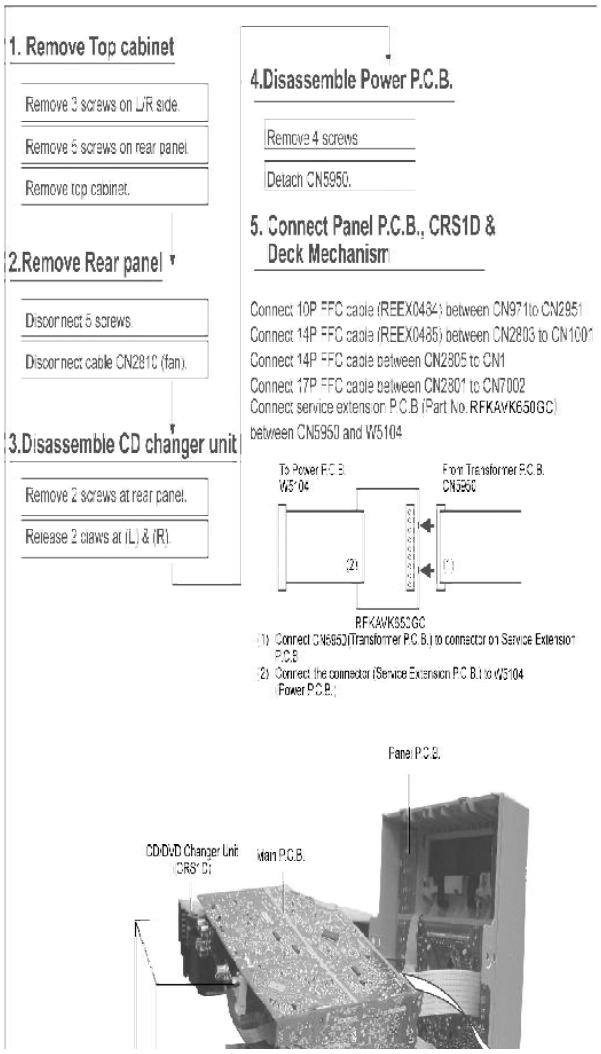
13.2. Checking and Repairing of Transformer P.C.B.



13.3. Checking and Repairing of Panel, Deck & Deck Mechanism P.C.B.


1. Remove Top cabinet
Remove 3 screws on L/R side.
Remove 5 screws on rear panel.
Remove top cabinet.
2. Disassemble Front panel
Disconnect 5 connectors. CN2803, CN2806, CN2951, CN5950 & CN5951.
Bent front panel forward.
Release 2 claws.
3. Disassemble Panel P.C.B.
Remove volume knob.
Remove 6 screws.
Release 2 catches.
4. Disassemble Deck mechanism unit
Detach CN971.
Disconnect CN1001
Remove 5 screws.
Push lever upward.
5. Connect Panel P.C.B., CRS1D & Deck Mechanism
Connect 10P FFC cable (REEX0464) between CN971 to CN2951
Connect 14P FFC cable (REEX0465) between CN2803 to CN1001
Connect 14P FFC cable between CN2805 to CN1
Connect 17P FFC cable between CN2801 to CN7002
Panel P.C.B.
Main P.C.B.
CD/DVD Changer Unit (CRS1D)

13.4. Checking and Repairing of Power P.C.B.


1. Remove Top cabinet
Remove 3 screws on L/R side.
Remove 5 screws on rear panel.
Remove top cabinet.
2.Remove Rear panel
Disconnect 5 screws.
Disconnect cable CN2810 (fan).
3.Disassemble CD changer unit
Remove 2 screws at rear panel.
Release 2 claws at (L) & (R).
4.Disassemble Power P.C.B.
Remove 4 screws.
Detach CN5950.
5. Connect Panel P.C.B., CRS1D & Deck Mechanism
Connect 10P FFC cable (REEX0434) between CN971 to CN2951
Connect 14P FFC cable (REEX0435) between CN2803 to CN1001
Connect 14P FFC cable between CN2805 to CN1
Connect 17P FFC cable between CN2801 to CN7002
Connect service extension P.C.B (Part No. RFKAVK650GC) between CN5950 and W5104
To Power P.C.B. W5104
From Transformer P.C.B. CN5950
(2)
(1)
RFKAVK650GC
(1) Connect CN5950 (Transformer P.C.B.) to connector on Service Extension P.C.B.
(2) Connect the connector (Service Extension P.C.B.) to W5104 (Power P.C.B.).
Panel P.C.B.
CD/DVD Changer Unit (CRS1D)
Main P.C.B.

14. Adjustment Procedures

14.1. Cassette Deck Section

- Measurement Condition

- Reverse-mode selector switch:
- Tape edit: NORMAL
- Make sure head, capstan and press roller are clean.
- Judgeable room temperature 20 ± 5 °C (68 ± 9°F)

- Measuring instrument
- EVM (DC Electronic volmeter)
- Digital frequency counter
- Test Tape
- Tape speed gain adjustment (3 kHz, -10 dB); QZZCWAT

14.1.1. Head Azimuth Adjustment (Deck 1/2)

Caution:

- Please replace both azimuth adjustment screw and springs simultaneously when readjusting the head azimuth. (shown in Fig. 2) Even if you wish to readjust the head azimuth without replacing the acrews and springs, a fine adjustment to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig. 3)

1. Playback the azimuth adjustment portion (8 kHz, -20dB) of the test tape (QZZCFM) in the forward play mode. Vary the azimuth adjustment screw until the output of the R-CH (PB OUT-R) are maximized.
2. Perform the same adjustment in the reverse play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

14.1.2. Tape Speed Adjustment (Deck 1/2)

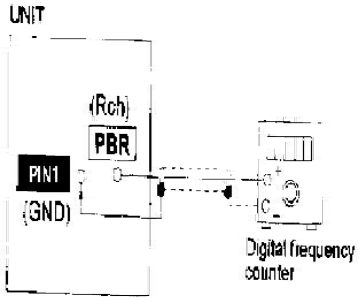
1. Set the tape edit button to “NORMAL” position.

2. Insert the test tape (QZZCWAT) to DECK 2 and playback (FWD side) the middle portion of it.
3. Adjust Motor VR (DECK 2) for the output value shown below.

Adjustment target: 2940 ~ 3060 Hz (NORMAL speed)

4. After alignment, assure that the output frequency of the DECK 1 FWD are within ±60 Hz of the value of the output frequency of DECK 2 FWD.

Fig. 1



14.1.3. Bias Voltage Check

1. Set the unit "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and the unit to "REC" mode (use ●, REC key).
3. Measure and make sure that the output is within the standard value.

Bias voltage for Deck 2	14±4mV (Normal)

Fig. 2

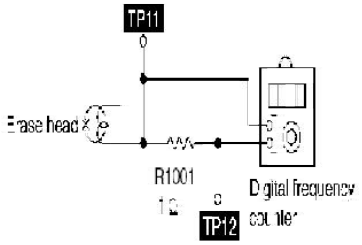
Fig. 3

14.1.4. Bias Frequency Adjustment (Deck 1/2)

1. Set the unit to “AUX” position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to “REC” mode (use ●, REC key).
3. Adjust L1002 so that the output frequency is within the standard value.

Standard Value: 89 ~ 110 kHz

Fig. 4



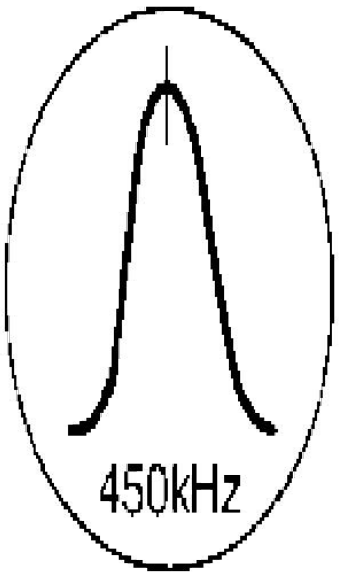
14.2. Tuner Section

14.2.1. AM-IF Alignment

1. Connect the instrument as shown in Fig. 5.
2. Set the unit to AM mode.
3. Apply signal as shown in Fig. 5 from AM-SG.
4. Adjust Z2602 so that the output frequency is maximized in Fig. 6.

Fig. 5

Fig. 6



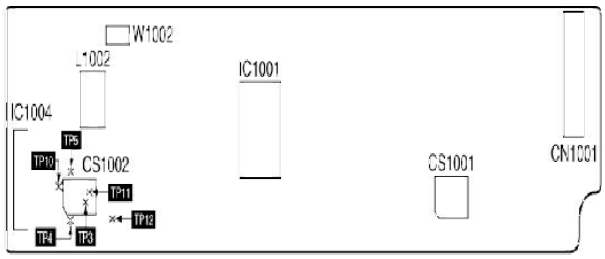
14.2.2. AM RF Adjustment

1. Connect the instrument as shown in Fig. 7.
2. Set the unit to AM mode.
3. Set AM-SG to 520kHz.
4. Receive 520kHz in the unit.
5. Adjust L2601 (OSC) so that the EVM-AC is maximized.
6. Set AM-SG to 600Hz.
7. Receive 600Hz in the unit.
8. Adjust L2601 (ANT) so that the EVM-SG is maximized.
9. Set AM-SG to 520kHz.
10. Receive 520kHz in the unit.
11. Adjust L2602 (OSC) so that the EVM-DC value is with 1.1±0.5V.

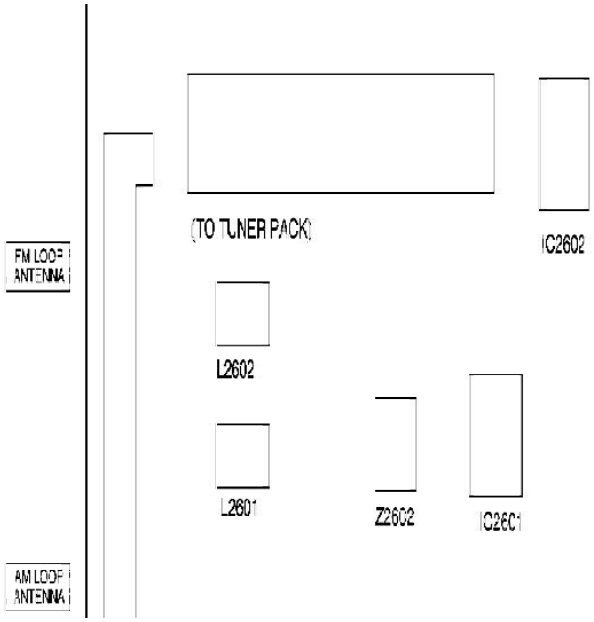
Fig. 7

14.3. Alignment Points

14.3.1. Cassette Deck Section



14.3.2. Adjustment Point



15. Voltage and Waveform Chart

Note:

Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

15.1. DVD Module P.C.B.

15.2. Main P.C.B.

15.3. Panel P.C.B., Power P.C.B. & Transformer P.C.B.

15.4. Deck P.C.B., Deck Mechanism P.C.B., Mic P.C.B. & Tuner P.C.B.

15.5. Waveform Chart

16. Wiring Connection Diagram

17. Block Diagram

18. Notes of Schematic Diagrams

(All schematic diagrams may be modified at any time with the development of the new technology)

S951
: MODE Switch

S952
: HALF Switch

S971
: MODE Switch

S972
: HALF Switch

S974
: RECINH_R Switch

S975
: RECINH_F Switch

S5950
: VOLTAGE SELECTOR Switch

S6101
: POWER Switch

S6102
: SSEQ Switch

S6103
: Sound EQ Switch

S6104
: Multi Remaster Switch

S6105
: Subwoofer Switch

S6107
: Deck 1 Switch

S6201
: Tape Switch

S6202
: DVD/CD Switch

S6203
: FWD Switch

S6204
: Stop Switch

S6205
: Rew Switch

S6206
: Rec Switch

S6207
: Deck 1/2 Switch

S6208
: Display/Demo Switch

S6209
: Music Port Switch

S6210
: Tuner Switch

S6302
: Disc Check Switch

S6303
: Open/Close Switch

S6304
: Disc Change Switch

S6305
: DISC 1 Switch

S6306
: DISC 2 Switch

S6307
: DISC 3 Switch

S6308

: DISC 4 Switch

S6309

: Disc 5 Switch

S6310

: Mic Vol + Switch

S6311

: Mic Vol - Switch

S6312

: Deck 2 Switch

VR6491

: VR VOLUME JOG

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.
- Importance safety notice :

  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

19. Schematic Diagram

19.1. Optical Pickup Unit Circuit

19.2. (A) DVD Module Circuit

19.3. (B) Main (Tuner) Circuit

19.4. (B) Main Circuit

19.5. (C) Panel Circuit & (D) Tact Switch Circuit

19.6. (E) Transformer Circuit (For GC/GN only)

19.7. (E) Transformer Circuit (For GCS/GS/GCT only) & (F) Mic Circuit

19.8. (G) Power Circuit

19.9. (H) Deck Circuit & (I) Deck Mechanism Circuit

20. Printed Circuit Board

Note: Circuit board diagrams may be modified at any time with the development of new technology.

20.1. (A) DVD Module P.C.B. (Side: A & B)

20.2. (B) Main P.C.B.

20.3. (C) Panel P.C.B. (For GC/GS/GCS/GCT)

20.4. (C) Panel P.C.B. (For GN only)

20.5. (E) Transformer P.C.B. (For GC & GN only)

20.6. (E) Transformer P.C.B. (For GS, GCS & GCT only)

20.7. (G) Power P.C.B.

20.8. (D) Tact Switch P.C.B., (F) Mic P.C.B., (H) Deck P.C.B., (I) Deck Mechanism P.C.B. & (J) Tuner P.C.B.

21. Basic Troubleshooting Guide for Backend Module

21.1. Firmware and Key Download

Problems	Checking Points	Checking Components
1) Firmware downloading fails. 2) CPPM/CPRM key download fails.	a) Check supply voltages on ICs pins. b) Check oscillation frequency and level. c) Check reset signal and power voltage rise time. d) Check Flash ROM address and data bus. e) Check SDRAM address and data bus, CLK and other control signals waveform. f) Check EEPROM CLK and data line. * Compare the above with OK condition Module.	IC8111, IC8651, IC8001, IC8051, IC815 X8621, C8621, C8622, R8621, R8622 IC8601 IC8651 IC8051 IC8611 * Check for solder short and/or component missing/damaged.

21.2. Initialisation and Playability

Problems	Checking Points	Checking Components
1) No DVD logo screen saver.	a) Check supply voltages (3.3V and 1.2V). b) Check video signals especially Luminance, Y signal. c) Check SDRAM, EEPROM and Flash ROM for solder short.	IC8111, IC8151 LB8301, R8321, R8322 IC8051, IC8611, IC8651
2) Picture black and white only.	a) Check C (Chroma) signal if using Composite S-Video. b) Check P_b and P_r signal if using Component.	LB8302 LB8304, LB8305
3) Distorted picture and abnormal sound is heard during initialisation.	a) Check SDRAM address and data bus, CLK and other control signals waveform. b) Check video signals. c) Check audio DAC circuitry. * Compare the above with OK conditoin Module.	IC8051 LB8301, R8321, R8322, LB8302, R8325, R8326 IC8421 * Check for solder short and/or componer missing/damaged.
4) No TOC/ Long TOC	a) Check motor driver circuitry (voltages). b) Check laser drive circuitry (voltages and current). c) Check LSI connection to motor drive circuitry. * Compare the above with OK condition Module.	IC8251 Q8550, Q8551, Q8552, Q8560, Q8561, Q85 IC8001 * Check for solder short and/or componer missing/damaged.
5) Disc not spinning. 6) Traverse not moving. 7) Traverse and spindle abnormal movement.	a) Check connection from Backend Module to Traverse Unit. b) Check motor driver circuitry on voltages and control signals. * Compare the above with OK condition Module.	FP8251, FP8531, IC8251 M+9V=FP8101(PIN 5/7), IC8251(PIN21) * Check for solder short and/or componer damaged.
8) Cannot read disc but spindle is spinning - Cannot read CD - Cannot read DVD	a) Check laser drive circuitry (voltages and current). - Check CD laser drive. - Check DVD laser drive. * Check voltages and LD current and compare with OK Module.	Q8550, Q8551, Q8552, Q8560, Q8561, Q85 Q8550, Q8560, Q8561, Q8562 Q8550, Q8551, Q8552, Q8560 * Check for solder short and/or componer missing/damaged.
9) Block noise during play.	a) Check SDRAM address and data bus signal. * Compare the above with OK conditoin Module.	IC8051 * Check for solder short and/or componer damaged.

Problems	Checking Points	Checking Components
10) DVD Audio no audio output	a) CPPM key download NG, check test point for CPPM key download. b) Check EEPROM. * Check test point damaged or broken pattern.	IC8611 * Check for component damaged.
11) No audio	a) Check audio signal IC8421(5.1 ch), IC8420(2.1 ch) b) Check audio DAC control signals. c) Check Zero Flag and A-Mute signal. * Compare the above with OK condition Module.	(MIXL/MIXR/FL/FR) LB8421,LB8422,LB8425,LB8426 (SURL/SURR/CEN/SW) LB8427,LB8428,LB8429,LB8431 (IC8421/IC8420) Pin 5,6,7 & 8 QR8420, LB8424 * Check for solder short and/or compone missing/damaged.

22. Illustration of ICs, Transistors and Diodes

23. Terminal Function of IC

23.1. IC2801 (C2CBYY000267) System Microprocessor

Pin No.	Mark	I/O	Function
1	LM_L	I	Level Meter Left
2	N.C.	-	No Connection
3	PLLCE	O	PLL Chip Select
4	WIDE1	O	S.VIDEO output control
5	DVD_PCONT	O	Power control pin for DVD module
6	DVD_MUTE	I	Signal from DVD module control mute circuit
7	F_HOP	O	F_Hop for Digital Amplifier
8	BYTE	-	External Data Bus Width Select Input (Connect to Ground)
9	CNVss/ EFP_CNVss	-	Flash Mode Terminal (Connected to Ground)
10	XC_IN	-	32.768 kHz Sub Clock
11	XC_OUT	-	32.768 kHz Sub Clock
12	RESET/ EFP_RESET	-	Reset Input (ACTIVE L)

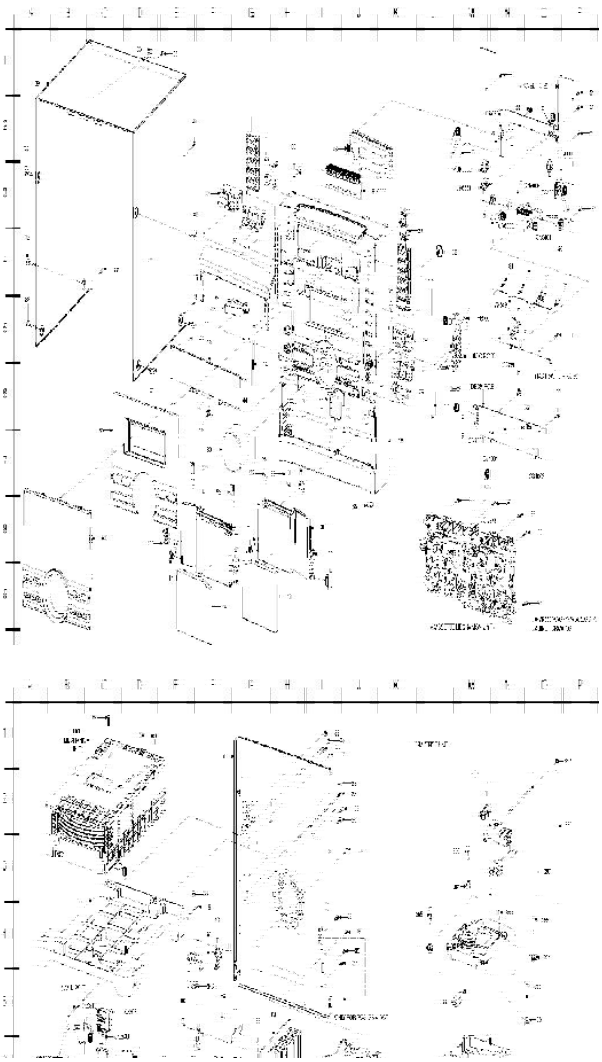
Pin No.	Mark	I/O	Function
13	XOUT	-	10 MHz Main Clock
14	VSS	-	Ground (0V)
15	XIN	-	10 MHz Main Clock
16	VCC	-	Power Supply (+5V)
17	NMI	-	Connect to VCC (+ 5V)
18	RMT	I	Remote Control Input
19	N.C.	-	No Connection
20	SYNC	I	AC Failure Detect Input
21	ST/DO	I	Tuner IF Data/Stereo Input
22	SD	I	Tuner Signal Detect Input
23	KA_CS	-	No Connection
24	KA_CLK	-	No Connection
25	KA_DAT	-	No Connection
26	ASP_DAT	O	ASP DATA
27	ASP_CLK	O	ASP CLOCK
28	N.C.	-	No Connection
29	PLL_DAT	O	PLL DATA
30	PLL_CLK	O	PLL CLK
31	REG 1	I	REGION SETTING 1 (Tuner)
32	REG 2	I	REGION SETTING 2 (Tuner)
33	REG 3	I	REGION SETTING 3 (Tuner)
34	REG 4	I	REGION SETTING 4 (Tuner)
35	DVD_CMD	O	CMD signal for the DVD Module
36	DVD_STA	I	STATUS signal from the DVD Module
37	DVD_CLK	I	CLOCK signal for the DVD Module
38	MODEL_SLCT	I	MODEL SELECT (Active Low)
39	MOD_DA	O	Digital Amplifier Muting
40	MUTE_A	O	Audio Mute
41	EE_CS/EFP/EPM	O	EEPROM Chip Select
42	EE_CLK	O/I	EEPROM CLOCK
43	EE_DATA	O/I	EEPROM DATA

Pin No.	Mark	I/O	Function
44	SW_LVL1	-	Subwoofer Level 1
45	SW_LVL2	-	Subwoofer Level 2
46	PCONT/EFP_CE	O	Main Transformer Control Output
47	DC_DET	I	DC Detect Input
48	LED_CTRL1	-	No Connection
49	LED_CTRL2	-	No Connection
50	MIC_LVL1	-	No Connection
51	MIC_LVL2	-	No Connection
52	HALF_1	I	DECK 1 HALF PLAYBACK INPUT
53	MODE_1	I	DECK 1 MODE PLAYBACK INPUT
54	MUTE_FHOP	-	No Connection
55	N.C.	-	No Connection
56	PLG_1	O	DECK 1 Plunger Control
57	PLG_2	O	DECK 2 Plunger Control
58	MTR	O	DECK motor control (“L” for Motor ON)
59	REC	O	L when record circuit is operating
60	DECK1_H	O	H when DECK 1 P/B head is selected
61	N.C.	-	No Connection
62	Vcc	-	Power Supply (+5V)
63	N.C.	-	No Connection
64	Vss	-	Ground (0V)
65	N.C.	-	No Connection
66	N.C.	-	No Connection
67	V_JOG_A	I	Volume Jog A
68	V_JOG_B	I	Volume Jog B
69	ECHO_1	O	No Connection
70	ECHO_2	O	No Connection
71	FL reset	-	No Connection
72	FL_CS	O	FL Driver Chip Select
73	FL_DATA	O	Serial Data To FL Driver
74	FL_CLK	O	Serial Clock To FL Driver
75	ECHO_3	O	No Connection
76	ECHO_Mute	O	Echo Muting
77	N.C.	-	No Connection

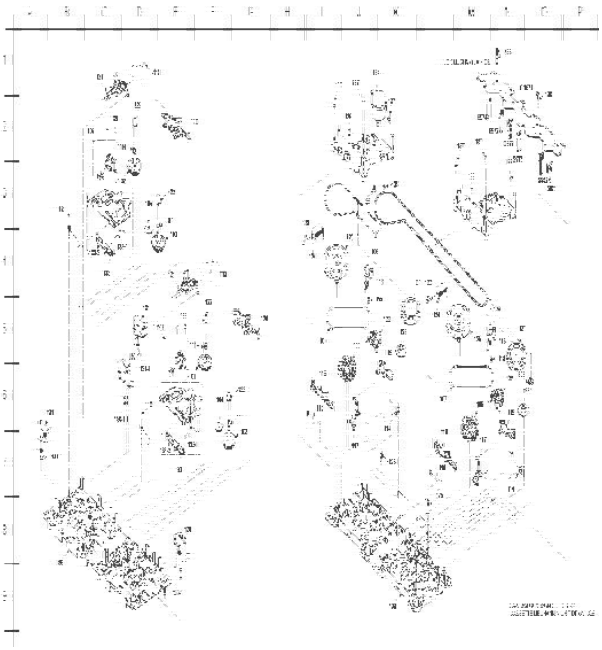
Pin No.	Mark	I/O	Function
78	ST_SW	I	Stock Switch of CRS1
79	MOT_CCW	O	CRS1 motor CCW
80	MOT_CW	O	CRS1 motor CW
81	HOME_SW	I	Home Switch for CRS1
82	CAM_SENSOR	I	Close Switch for CRS1
83	PLUNGER	O	Plunger for CRS1
84	BOTTOM_SW	I	Bottom Switch for CRS1
85	PLAY_SW	I	Play Switch for CRS1
86	UD_SENSOR	I	UD Sensor for CRS1
87	OPEN_SW	I	Open Switch for CRS1
88	N.C.	-	No Connection
89	DVD_REG	AD IN	DVD Region setting
90	N.C.	-	No Connection
91	DECK2	AD IN	Deck Condition Input 2(R_INHF/MODE2/ HALF2)
92-94	KEY3-KEY1	AD IN	KEY 3 to KEY 1 INPUT
95	PHOTO_2	AD IN	Rotation Detection Signal (DECK2)
96	AVss	-	Analog Power Supply Input (Connect to GND)
97	PHOTO_1	AD IN	Rotation Detection Signal (DECK 1)
98	VREF	-	Reference for A-D (+ 5V)
99	AVcc	-	Analog Power Supply Input
100	N.C.	-	No Connection

24. Exploded Views

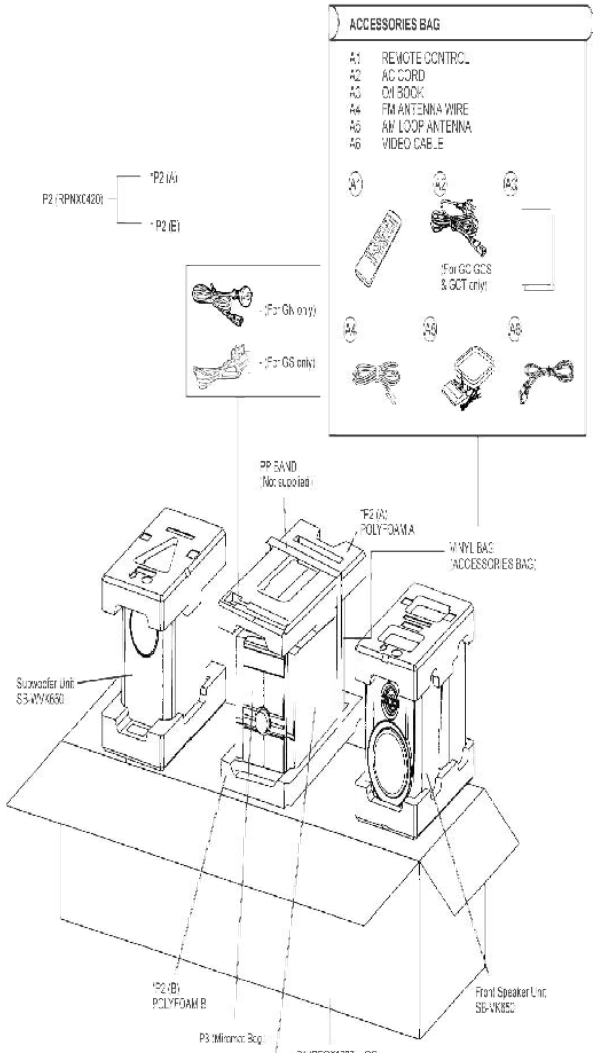
24.1. Cabinet Parts Location



24.2. Cassette Mechanism Unit Parts Location (RAA3413-1S)



24.3. Packaging



25. Replacement Parts List

Notes:

- Important safety notice:

Components identified by mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to caution statements

on “Precaution of Laser Diode”.

- **Capacitor values are in microfarads (F) unless specified otherwise, P= Pico-farads (pF), F= Farads.**
- **Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).**
- **The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.**
- **[M] markings in the Remarks columns indicates parts supplied by PAVCSG.**
- **[SPG] markings in the Remarks columns indicates parts that are supplied by PAVC.**
- **Reference for O/I book languages are as follows:**

Ar:	**Arabic**	**Du:**	**Dutch**	**It:**	**Italian**	**Sp**	**Spanish**
Cf:	**Canadian French**	**En:**	**English**	**Ko:**	**Korean**	**Sw:**	**Swedish**
Cz:	**Czech**	**Fr:**	**French**	**Po:**	**Polish**	**Co:**	**Traditional Chinese**
Da:	**Danish**	**Ge:**	**German**	**Ru:**	**Russian**	**Cn:**	**Simplified Chinese**
Pe:	**Persian**	**Ur:**	**Ukraine**				

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	L6FALEFH0030	FAN UNIT	[M]
2	REEX0212-2	DPIM IMPORT WIRE	[M]
3	REEX0566	50P FFC (CD-MAIN)	[M]
4	REEX0567	10P FFC WIRE	[M]
5	REEX0568	11P FFC WIRE	[M]
6	REEX0609	16P FFC WIRE	[M]
7	REEX0617	30P FFC WIRE	[M]
8	REXX0479	2P FLAT WIRE	[M]
9	REXX0505	7P FLAT WIRE	[M]
10	REXX0532	9P FLAT WIRE	[M]
11	REXX0325	9P FLAT WIRE	[M]
12	RGKX0367-K	TOP ORNAMENT	[M]
13	RGKX0368-K	CD LID	[M]
14	RGKX0369-K	CASSETTE LID ORN. L	[M]
15	RGKX0370-K	CASSETTE LID ORN. R	[M]
16	RGLX0136-Q	LIGHTING PIECE L	[M]
17	RGLX0137-Q	LIGHTING PIECE R	[M]
18	RGLX0138-Q	POWER LIGHT PIECE	[M]
19	RGPX0256A-S	FRONT PANEL	[M]GN
19	RGPX0256-S	FRONT PANEL	[M]GC/GS/GCS/GCT
20	RGRX0059A-A	REAR PANEL	[M]GS
20	RGRX0059B-A	REAR PANEL	[M]GC
20	RGRX0059B-B	REAR PANEL	[M]GN
20	RGRX0059A-B	REAR PANEL	[M]GCS
20	RGRX0059A-D	REAR PANEL	[M]GCT
21	RGUX0679-S	POWER BUTTON	[M]
22	RGUX0680-S	SOUND BUTTON	[M]
23	RGUX0681A-S	CD CONTROL BUTTON	[M]GN
23	RGUX0681-S	CD CONTROL BUTTON	[M]GC/GS/GCS/GCT
24	RGUX0682-S	FUNCTION BUTTON L	[M]
25	RGUX0683-S	FUNCTION BUTTON R	[M]
26	RGUX0684-K	CONTROL BUTTON L	[M]
27	RGUX0685-K	CONTROL BUTTON R	[M]
28	RGUX0686-S	DECK BUTTON L	[M]
29	RGUX0687-S	DECK BUTTON R	[M]
30	RGWX0072-S	VOLUME KNOB	[M]
31	RHD26046-L	SCREW	[M]
32	RHD30008	SCREW	[M]
33	RHD30007-1SJ	SCREW	[M]
34	RHD30111-3	SCREW	[M]
35	RHD30119-S	SCREW	[M]
36	RKA0072-KJ	LEG CUSHION	[M]
37	RKFX0133-S	CASSETTE LID L	[M]
38	RKFX0134-S	CASSETTE LID R	[M]
39	RKMX0130-S	TOP CABINET	[M]
40	RKWX0263-H	FL WINDOW	[M]
41	RMBX0036	CASS OPEN SPRING	[M]
42	RMBX0049	DVD LID SPRING	[M]
43	RMC0158-S2	TRANSISTOR HOLDER	[M]
44	RMG0547-K	CUSHION	[M]
45	RMGX0044-1	D.AMP. INSULATOR	[M]
46	RMKX0118	BOTTOM CHASSIS	[M]
47	RMKX0119	DVD CHASSIS	[M]
48	RMNX0188	FL HOLDER	[M]
49	RMNX0190	LED HOLDER	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
50	RMVX0094-K	FL WINDOW BACKGROUND	[M]
51	RMYX0131	SUB HEAT SINK	[M]
52	RUS757ZAA	CASS HALF SPRING	[M]
53	RWJ0102050CK	WIRE MECHA MOTOR	[M]
54	RXXX0081	HEAT SINK UNIT	[M]
55	RXGX0002	DAMPER GEAR	[M]
56	XTB3+8JFJ	SCREW	[M]
57	XTV3+10GFJ-M	SCREW	[M]
58	XTW3+10TFC	SCREW	[M]
59	XTW3+12TFJ	SCREW	[M]
60	XTWS3+6TFJ	SCREW	[M]
		CASSETTE MECHANISM UNIT	
101	RED0064-2	R/P HEAD BLOCK UNIT	[M]
102	RED0063-2	P/B HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026-4	MAIN GEAR	[M]
106	RDR0029-4	RELAY PULLEY	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-2	CAPSTAN BELT A	[M]
109	RDV0057-1	MAIN BELT B	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406-5	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370-4	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372-2	WINDING LEVER	[M]
119	RML0374-2	EJECT LEVER	[M]
120	RMM0131-1	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER ASS'Y	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061-1	FLYWHEEL F ASS'Y	[M]
127	RXF0062-1	FLYWHEEL R ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-2	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER F ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING F	[M]
131	RXL0125	PINCH ROLLER R ASS'Y	[M]
131-1	RMB0402	PINCH ARM SPRING R	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412-3	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0121	CAP MOTOR ASS'Y	[M]
135	RHD26022-1	MOTOR SCREW	[M]
136	XTW2+5LFJ	HEAD BLOCK UNIT SCREW	[M]
137	XTW26+10SFJ	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17FJ	PCB EARTH SCREW	[M]
139	RFKJXED70-K	MAIN CHASSIS	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE UNIT	
360	RAE2018W-S	DT69U3 BLOCK	[M]
361	RMG0598-A	FLOATING RUBBER	[M]
362	RMG0617-H	CUSHION RUBBER A	[M]
363	RMG0618-H	CUSHION RUBBER B	[M]
364	RMRX0066	MIDDLE CHASSIS	[M]
365	RMS0789	FIXED PIN	[M]
366	RXQ0946	TRAVERSE MOTOR ASS'Y	[M]
367	RXQ1389	DVD OPU SUB ASS'Y	[M]
368	RMEX0041	MIDDLE CHASSIS SPRING	[M]
369	XTV2+6GFJ	SCREW	[M]
		PRINTED CIRCUIT BOARD	
	REP4012D	DVD MODULE P.C.B. (SIDE: A)	[M](RTL)GC/GS/GN
	REP4012E	DVD MODULE P.C.B. (SIDE: A)	[M](RTL)GCS/GCT
	REP4012D	DVD MODULE P.C.B. (SIDE: B)	[M](RTL)GC/GS/GN
	REP4012E	DVD MODULE P.C.B. (SIDE: B)	[M](RTL)GCS/GCT
	REPX0547A	MAIN P.C.B.	[M](RTL)GC/GS
	REPX0547B	MAIN P.C.B.	[M](RTL)GCS/GCT
	REPX0547C	MAIN P.C.B.	[M](RTL)GN
	REPX0541A	PANEL P.C.B.	[M](RTL)GC/GS/GCS /GCT
	REPX0541B	PANEL P.C.B.	[M](RTL)GN
	REPX0519B	TRANSFORMER P.C.B.	[M](RTL)GN
	REPX0519C	TRANSFORMER P.C.B.	[M](RTL)GC
	REPX0519A	TRANSFORMER P.C.B.	[M](RTL)GS/GCS/ GCT
	REPX0522B	POWER P.C.B.	[M](RTL)
	REPX0331F	DECK P.C.B.	[M](RTL)
	REPX0321B	DECK MECHANISM P.C.B.	[M](RTL)
	REPX0541A	MIC P.C.B.	[M](RTL)GC/GS/GCS /GCT
	REPX0541A	TACT SWITCH P.C.B.	[M](RTL)GC/GS/GCS /GCT
	REPX0541B	TACT SWITCH P.C.B.	[M](RTL)GN
	REP1999B	TUNER P.C.B.	[M](RTL)
		INTEGRATED CIRCUITS	
IC951	CNB13030R2AU	PHOTO INTERRUPTOR	[M]
IC971	CNB13030R2AU	PHOTO INTERRUPTOR	[M]
IC1001	AN7348S-E1	IC P.B. EQ/REC AMP/ALC/TPS AMP	[M]
IC1004	C1AA00000612	IC R/P SELECT	[M]
IC2061	C0ABBB000244	IC OP-AMP	[M]
IC2101	C1BB00000732	IC ASP	[M]
IC2103	C0ABBB000230	IC OP-AMP	[M]
IC2561	C0DAAMH00012	IC REGULATOR	[M]
IC2601	C1BB00000962	IC FM/AM IF AMP DET/AM OSC MIX/FM MPX	[M]
IC2602	C1CB00001937	IC PLL FREQUENCY SYNTHESIZER	[M]
IC2701	C9ZB00000498	IC VIDEO BUFFER	[M]
IC2801	C2CBYY000267	IC MICROPROCESSOR	[M]
IC2804	C0AABA000009	IC OP-AMP	[M]
IC5201	C0JBAB000011	IC LOGIC	[M]
IC5301	C1BA00000407	IC 2-CH DIGITAL AMP	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC5501	C1BA00000407	IC 2-CH DIGITAL AMP	[M]
IC6601	C0HBB0000057	IC FL DRIVER	[M]
IC6930	C0ABBB000244	IC SMT OP AMP	[M]GC/GS/GCS/GCT
IC6931	C1BB00001061	IC ECHO	[M]GC/GS/GCS/GCT
IC8001	MN2DS0009VP	IC DV3.2 LSI VIDEO	[M]
IC8051	C3ABPG000145	IC 64 SDRAM	[M]
IC8111	C0CBCBD00018	IC 3.3 REGULATOR	[M]
IC8151	C0DBEHG00006	IC REGULATOR	[M]
IC8251	C0GBG0000048	IC DRIVER	[M]
IC8420	C0FBBK000049	IC 2 CHANNEL DAC	[M]
IC8601	C0EBA0000029	IC RESET	[M]
IC8606	C0EBE0000455	IC RESET	[M]
IC8651	RFKWMHA0H160	IC 16M FLASH ROM	[M]GC/GN/GS
IC8651	RFKWMHA0J160	IC 16M FLASH ROM	[M]GCS/GCT
IC8691	C0JBAA000346	IC AND GATE LOGIC	[M]
IC8695	C0JBAA000346	IC AND GATE LOGIC	[M]
		TRANSISTORS	
Q1	B1CECC000003	TRANSISTOR	[M]
Q2	B1AAAC000016	TRANSISTOR	[M]
Q3	B1AAAD000015	TRANSISTOR	[M]
Q4	B1AAAD000015	TRANSISTOR	[M]
Q1003	B1AAGC000007	TRANSISTOR	[M]
Q1004	B1AAGC000007	TRANSISTOR	[M]
Q1005	B1AAGC000007	TRANSISTOR	[M]
Q1007	B1ABCF000176	TRANSISTOR	[M]
Q1017	B1AARC000003	TRANSISTOR	[M]
Q2051	B1GDCFJJ0047	TRANSISTOR	[M]
Q2052	B1GFECYY0001	TRANSISTOR	[M]
Q2061	B1ABCF000176	TRANSISTOR	[M]
Q2062	B1ABCF000176	TRANSISTOR	[M]
Q2063	B1GDCFJJ0047	TRANSISTOR	[M]
Q2064	B1GDCFJJ0047	TRANSISTOR	[M]
Q2065	B1ABCF000176	TRANSISTOR	[M]
Q2142	B1ABCF000176	TRANSISTOR	[M]
Q2143	B1ABEB000002	TRANSISTOR	[M]
Q2242	B1ABCF000176	TRANSISTOR	[M]
Q2243	B1ABEB000002	TRANSISTOR	[M]
Q2366	B1GFECYY0001	TRANSISTOR	[M]
Q2501	B1GDCFJJ0047	TRANSISTOR	[M]
Q2502	B1GFECYY0001	TRANSISTOR	[M]
Q2551	B1ADCF000001	TRANSISTOR	[M]
Q2552	B1ACKD000006	TRANSISTOR	[M]
Q2576	B1GBCFJA0028	TRANSISTOR	[M]
Q2601	B1AABC000003	TRANSISTOR	[M]
Q2606	B1GCCFJJ0016	TRANSISTOR	[M]
Q2806	B1GBCFJJ0051	TRANSISTOR	[M]
Q2901	B1GBCFJN0033	TRANSISTOR	[M]
Q2912	B1GBCFJN0033	TRANSISTOR	[M]
Q2913	B1GBCFJJ0051	TRANSISTOR	[M]
Q2914	B1ACKD000006	TRANSISTOR	[M]
Q2942	B1ACKD000006	TRANSISTOR	[M]
Q2943	B1ABCF000176	TRANSISTOR	[M]
Q2948	B1ABCF000176	TRANSISTOR	[M]
Q2949	B1ABCF000176	TRANSISTOR	[M]
Q2978	B1GDCFJJ0047	TRANSISTOR	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
Q2979	B1GDCFJJ0047	TRANSISTOR	[M]
Q2980	B1ABCF000176	TRANSISTOR	[M]
Q5101	B1DEGM000026	TRANSISTOR	[M]
Q5102	B1DEGM000026	TRANSISTOR	[M]
Q5103	B1ABCF000176	TRANSISTOR	[M]
Q5104	B1ABCF000176	TRANSISTOR	[M]
Q5108	B1ABCF000176	TRANSISTOR	[M]
Q5109	2SB0709AHL	TRANSISTOR	[M]
Q5110	B1AACF000064	TRANSISTOR	[M]
Q5111	B1BACG000048	TRANSISTOR	[M]
Q5112	B1BCCG000023	TRANSISTOR	[M]
Q5113	B1GDCFNA0001	TRANSISTOR	[M]
Q5114	B1ABCF000176	TRANSISTOR	[M]
Q5115	B1AAKD000014	TRANSISTOR	[M]
Q5150	B1GDCFJJ0047	TRANSISTOR	[M]
Q5151	B1GDCFJJ0047	TRANSISTOR	[M]
Q5152	B1ABCF000176	TRANSISTOR	[M]
Q5201	B1ABCF000176	TRANSISTOR	[M]
Q5202	B1ADCF000063	TRANSISTOR	[M]
Q5707	B1BACD000018	TRANSISTOR	[M]
Q5708	B1ACCF000094	TRANSISTOR	[M]
Q5709	B1BCCD000019	TRANSISTOR	[M]
Q5950	B1BACD000018	TRANSISTOR	[M]
Q5951	2SB0621AHA	TRANSISTOR	[M]
Q5952	B1GACFJJ0018	TRANSISTOR	[M]
Q5953	B1AACF000064	TRANSISTOR	[M]
Q5954	B1AAKD000012	TRANSISTOR	[M]GS/GCS/GCT
Q6411	B1ACKD000006	TRANSISTOR	[M]
Q6415	B1ACKD000006	TRANSISTOR	[M]
Q6421	B1GBCFJJ0051	TRANSISTOR	[M]
Q6425	B1GBCFJJ0051	TRANSISTOR	[M]
Q6701	B1GBCFJN0033	TRANSISTOR	[M]
Q6702	B1GBCFJN0033	TRANSISTOR	[M]
Q6703	B1GBCFJN0033	TRANSISTOR	[M]
Q6803	B1ACCF000094	TRANSISTOR	[M]
Q6804	B1ACCF000094	TRANSISTOR	[M]
Q6805	B1GACFJJ0018	TRANSISTOR	[M]
Q6901	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6902	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6903	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6904	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6905	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6906	B1GBCFJJ0051	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6907	B1GBCFJJ0051	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6908	B1GBCFJJ0051	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6909	B1GBCFJJ0051	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6910	B1GDCFJJ0047	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6911	B1GDCFJJ0047	TRANSISTOR	[M]GC/GS/GCS/GCT
Q6912	B1ABCF000176	TRANSISTOR	[M]GC/GS/GCS/GCT
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	B1ADGB000008	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	B1ADGB000008	TRANSISTOR	[M]
QR8111	XP0621400L	TRANSISTOR	[M]GCS/GCT
QR8420	UNR521100L	TRANSISTOR	[M]
QR8571	UNR511V00L	TRANSISTOR	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
		DIODES	
D1	B0CBAD000004	DIODE	[M]
D2	B0CBAD000004	DIODE	[M]
D3	B0CBAD000004	DIODE	[M]
D951	MA2C16500E	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1003	B0ACCK000005	DIODE	[M]
D2031	B0BC7R500001	DIODE	[M]
D2061	B0BC2R4A0006	DIODE	[M]
D2062	B0BC2R4A0006	DIODE	[M]
D2241	B0ACEL000004	DIODE	[M]
D2311	B0BC4R300002	DIODE	[M]
D2332	B0ADCC000002	DIODE	[M]
D2411	B0BC4R300002	DIODE	[M]
D2551	B0ACEL000004	DIODE	[M]
D2552	B0BC7R500001	DIODE	[M]
D2553	B0JCPD000025	DIODE	[M]
D2555	B0EAKM000117	DIODE	[M]
D2556	B0EAKM000117	DIODE	[M]
D2557	B0EAKM000117	DIODE	[M]
D2576	B0ADCJ000020	DIODE	[M]
D2578	B0ACEL000004	DIODE	[M]
D2601	B0BC5R000009	DIODE	[M]
D2602	B0CDBB000015	DIODE	[M]
D2801	B0ACEL000004	DIODE	[M]
D2802	B0ADCJ000020	DIODE	[M]
D2804	B0ACEL000004	DIODE	[M]
D2911	B0ACEL000004	DIODE	[M]
D2912	B0EAKM000117	DIODE	[M]
D2944	B0BC5R600003	DIODE	[M]
D2946	B0ADCJ000020	DIODE	[M]
D5101	B0BA01100004	DIODE	[M]
D5102	B0BA02600018	DIODE	[M]
D5103	B0BA5R100013	DIODE	[M]
D5104	B0BA01100004	DIODE	[M]
D5105	B0BA02300017	DIODE	[M]
D5107	B0BA01500003	DIODE	[M]
D5108	B0BA5R700008	DIODE	[M]
D5109	B0BA01100004	DIODE	[M]
D5121	B0EAKM000122	DIODE	[M]
D5122	B0EAKM000122	DIODE	[M]
D5123	B0EAKM000122	DIODE	[M]
D5124	B0EAKM000122	DIODE	[M]
D5125	B0AACK000004	DIODE	[M]
D5126	B0ACEL000004	DIODE	[M]
D5127	B0EAKM000122	DIODE	[M]
D5128	B0EAKM000122	DIODE	[M]
D5129	B0EAKM000122	DIODE	[M]
D5152	B0BA01900005	DIODE	[M]
D5709	B0BA9R600002	DIODE	[M]
D5950	B0EAMM000038	DIODE	[M]
D5951	B0EAMM000038	DIODE	[M]
D5952	B0EAMM000038	DIODE	[M]
D5953	B0EAMM000038	DIODE	[M]
D5958	B0EAKM000117	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D5959	B0EAKM000117	DIODE	[M]
D5960	B0BA03000020	DIODE	[M]
D5961	B0AACK000004	DIODE	[M]
D5962	B0AACK000004	DIODE	[M]
D5963	B0AACK000004	DIODE	[M]GC/GN/GS
D5964	B0BA6R800008	DIODE	[M]
D5965	B0AACK000004	DIODE	[M]
D5966	B0AACK000004	DIODE	[M]
D5967	B0AACK000004	DIODE	[M]GS/GCS/GCT
D5968	B0AACK000004	DIODE	[M]GS/GCS/GCT
D5969	B0AACK000004	DIODE	[M]GS/GCS/GCT
D5970	B0EAKM000117	DIODE	[M]
D5971	B0EAKM000117	DIODE	[M]
D5972	B0EAKM000117	DIODE	[M]
D5973	B0EAKM000117	DIODE	[M]
D5974	B0EAKM000117	DIODE	[M]
D5975	B0EAKM000117	DIODE	[M]
D5976	B0EAKM000117	DIODE	[M]
D5977	B0EAKM000117	DIODE	[M]
D5986	B0AACK000004	DIODE	[M]GC/GN
D5987	B0AACK000004	DIODE	[M]GC/GN
D6458	B3AAA0000803	DIODE	[M]
D6635	B0BC5R600003	DIODE	[M]
D6701	B0BC8R100004	DIODE	[M]
D6702	B0BC8R100004	DIODE	[M]
D6707	B3AEA0000083	DIODE	[M]
D6708	B3AEA0000083	DIODE	[M]
D6803	B0ACCE000003	DIODE	[M]
D6930	B0BC5R000009	DIODE	[M]GC/GS/GCS/GCT
D6931	B0ACEL000004	DIODE	[M]GC/GS/GCS/GCT
D6932	B0ACEL000004	DIODE	[M]GC/GS/GCS/GCT
D6933	B0ACEL000004	DIODE	[M]GC/GS/GCS/GCT
D8211	MA2J11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
		VARIABLE RESISTOR	
VR6491	EVEKE2F2524B	VR VOLUME JOG	[M]
		SWITCHES	
S951	K0J1BB000017	SW MODE	[M]
S952	K0J1BB000021	SW HALF	[M]
S971	K0J1BB000017	SW MODE	[M]
S972	K0J1BB000021	SW HALF	[M]
S974	K0J1BB000021	SW RECINH_R	[M]
S975	K0J1BB000021	SW RECINH_F	[M]
S5950	K0ABLB000003	SW VOLTAGE SELECTOR	[M]GS/GCS/GCT
S6101	EVQ21405RJ	SW POWER	[M]
S6102	EVQ21405RJ	SW SSEQ	[M]
S6103	EVQ21405RJ	SW SOUND EQ	[M]
S6104	EVQ21405RJ	SW MULTI REMASTER	[M]
S6105	EVQ21405RJ	SW SUBWOOFER	[M]
S6107	EVQ21405RJ	SW DECK 1	[M]
S6201	EVQ21405RJ	SW TAPE	[M]
S6202	EVQ21405RJ	SW DVD/CD	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
S6203	EVQ21405RJ	SW FWD	[M]
S6204	EVQ21405RJ	SW STOP	[M]
S6205	EVQ21405RJ	SW REW	[M]
S6206	EVQ21405RJ	SW REC	[M]
S6207	EVQ21405RJ	SW DECK 1/2	[M]
S6208	EVQ21405RJ	SW DISPLAY/DEMO	[M]
S6209	EVQ21405RJ	SW MUSIC PORT	[M]
S6210	EVQ21405RJ	SW TUNER	[M]
S6302	EVQ21405RJ	SW DISC CHECK	[M]
S6303	EVQ21405RJ	SW OPEN/CLOSE	[M]
S6304	EVQ21405RJ	SW DISC CHANGE	[M]
S6305	EVQ21405RJ	SW DISC 1	[M]
S6306	EVQ21405RJ	SW DISC 2	[M]
S6307	EVQ21405RJ	SW DISC 3	[M]
S6308	EVQ21405RJ	SW DISC 4	[M]
S6309	EVQ21405RJ	SW DISC 5	[M]
S6310	EVQ21405RJ	SW MIC VOL +	[M]
S6311	EVQ21405RJ	SW MIC VOL -	[M]
S6312	EVQ21405RJ	SW DECK 2	[M]
		CONNECTORS	
CN971	K1MN10B00104	10P FFC CONNECTOR	[M]
CN1001	K1MN11B00016	11P CONNECTOR	[M]
CN2801	K1MY50AA0029	50P CONNECTOR	[M]
CN2803	K1MN11A00008	11P CONNECTOR	[M]
CN2805	K1MN14A00049	14P FFC CONNECTOR	[M]
CN2806	K1MN16A00073	16P FFC CONNECTOR	[M]
CN2807	K1MN30AA0004	30P CONNECTOR	[M]
CN2808	K1KB12B00036	12P CONNECTOR	[M]
CN2809	K1KB12B00036	12P CONNECTOR	[M]
CN2810	K1KA02AA0186	2P FAN CONNECTOR	[M]
CN5102	K1KA12AA0424	12P CONNECTOR	[M]
CN5103	K1KA12AA0424	12P CONNECTOR	[M]
CN5950	K1KA09AA0319	9P CONNECTOR	[M]
CN5951	K1KA09AA0193	9P CONNECTOR	[M]
CN5955	K1KA03AA0190	3P CONNECTOR	[M]
CN6401	K1MN10B00104	10P FFC CONNECTOR	[M]
CN6806	K1MN16B00133	16P FFC CONNECTOR	[M]
CN6807	K1MN30AA0004	30P CONNECTOR	[M]
CN6808	K1KA14AA0481	14P CONNECTOR	[M]
CP6201	K1KB14C00004	14P CONNECTOR	[M]
CS1001	K1MY05AA0043	5P CONNECTOR SOCKET	[M]
CS1002	K1MY05AA0043	5P CONNECTOR SOCKET	[M]
FP8101	K1MN50BA0173	50P FFC CONNECTOR	[M]
FP8251	K1MN06BA0148	6P FFC CONNECTOR	[M]
FP8531	K1MY26BA0025	26P CONNECTOR	[M]
		CERAMIC FILTERS	
CF2601	J0B1075AA014	FM CERAMIC FILTER	[M]
CF2602	J0B1075AA014	FM CERAMIC FILTER	[M]
		COILS & TRANSFORMERS	

Ref. No.	Part No.	Part Name & Description	Remarks
L1	G0C1R2KA0029	AXIAL COIL	[M]
L2	G0CR47KA0029	RF CHOKE COIL	[M]
L1001	G0C470JA0052	RF CHOKE COIL	[M]
L1002	G2ZZ00000024	BIAS OCS COIL	[M]
L2551	G0A101ZA0028	CHOKE COIL	[M]
L2555	G0A100D00002	CHOKE COIL	[M]
L2601	G2A411C00001	AM COIL	[M]
L2602	G2BPC0000016	OSCILLATOR COIL	[M]
L2901	J0JCC0000120	COIL	[M]
L2902	J0JCC0000120	COIL	[M]
L2903	J0JCC0000120	COIL	[M]
L2905	ERJ3GEYJ0R00	CHIP JUMPER	[M]
L2906	J0JCC0000120	COIL	[M]
L2907	J0JCC0000120	COIL	[M]
L2908	J0JCC0000120	COIL	[M]
L2909	J0JBC0000019	CHIP INDUCTOR	[M]GC/GN/GS
L2909	ERJ3GEY0R00V	CHIP JUMPER	[M]GCS/GCT
L2912	G0A100D00002	CHOKE COIL	[M]
L2913	G0A100G00005	RF CHOKE COIL	[M]GC/GN/GS
L5101	J0JKB0000037	FILTER	[M]
L5102	J0JKB0000037	FILTER	[M]
L5301	G0C220Z00002	COIL	[M]
L5302	G0B9R5K00001	CHOKE COIL	[M]
L5401	G0B9R5K00001	CHOKE COIL	[M]
L5402	G0B9R5K00001	CHOKE COIL	[M]
L5501	G0C220Z00002	COIL	[M]
L5502	J0JKB0000037	FILTER	[M]
L5503	J0JKB0000037	FILTER	[M]
L5950	ELF15N035AN	LINE FILTER	[M]GN/GS/GCS/GCT
L6551	G0C100JA0052	INDUCTOR	[M]
L6552	G0C101JA0052	INDUCTOR	[M]
L6553	G0C101JA0052	INDUCTOR	[M]
L6554	G0C100JA0052	INDUCTOR	[M]
L6555	G0C101JA0052	INDUCTOR	[M]
L6556	G0C101JA0052	INDUCTOR	[M]
L6901	G0C3R3JA0052	COIL	[M]GC/GS/GCS/GCT
L6902	G0C100JA0052	INDUCTOR	[M]GC/GS/GCS/GCT
L8201	G1C100K00019	CHIP COIL	[M]
L8301	G1C100K00019	CHIP COIL	[M]
L8302	G1C100K00019	CHIP COIL	[M]
L8501	G1C100K00019	CHIP COIL	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8011	J0JHC0000045	CHIP INDUCTOR	[M]
LB8257	ERJ3GEY0R00V	CHIP JUMPER	[M]
LB8258	ERJ3GEY0R00V	CHIP JUMPER	[M]
LB8259	ERJ3GEY0R00V	CHIP JUMPER	[M]
LB8260	ERJ3GEY0R00V	CHIP JUMPER	[M]
LB8301	J0JBC0000042	CHIP BEAD	[M]
LB8302	J0JBC0000042	CHIP BEAD	[M]
LB8303	J0JBC0000042	CHIP BEAD	[M]
LB8304	J0JBC0000042	CHIP BEAD	[M]
LB8305	J0JBC0000042	CHIP BEAD	[M]
LB8401	J0JBC0000042	CHIP BEAD	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8421	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8422	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8423	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8424	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8491	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8530	J0JHC0000045	CHIP INDUCTOR	[M]
LB8531	ERJ2GE0R00X	CHIP JUMPER	[M]
LB8551	J0JBC0000042	CHIP BEAD	[M]
LB8561	J0JBC0000042	CHIP BEAD	[M]
LB8571	J0JBC0000042	CHIP BEAD	[M]
LB8690	J0JBC0000106	CHIP BEAD	[M]
LB8691	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8692	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8693	ERJ2GEJ101X	CHIP RESISTOR	[M]
T5950	G4CYBYY00003	TRANSFORMER	[M]
T5951	G4C2AAJ00005	BACK UP TRANSFORMER	[M]
		COMPONENT COMBINATIONS	
Z971	RGSD12A1445T	RADA RESISTOR	[M]
Z2602	G2BAD0000003	AM IFT	[M]
Z5950	ERZV10V511CS	ZENER	[M]
Z6400	B3RAD0000125	REMOTE SENSOR	[M]
		RELAY	
RL5950	K6B1AEA00015	POWER RELAY	[M]
		OSCILLATORS	
X2602	H3F1065A0002	RESONATOR	[M]
X2603	H0H720400007	CRYSTAL OSCILLATOR	[M]
X2801	H0A327200115	CRYSTAL OSCILLATOR	[M]
X2802	H2B100500004	CERAMIC RESONATOR	[M]
X5201	H2A415300001	CRYSTAL OSCILLATOR	[M]
X5202	H2A375300003	CRYSTAL OSCILLATOR	[M]
X8621	H0J270500085	CRYSTAL	[M]
		DISPLAY TUBES	
FL6602	A2BD00000162	FL	[M]
FL8101	F1H0J1050022	CHIP CAPACITOR	[M]
FL8102	F1H0J1050022	CHIP CAPACITOR	[M]
FL8103	F1H0J1050022	CHIP CAPACITOR	[M]
FL8104	F1J1E1040022	CHIP CAPACITOR	[M]
		FUSES	
F1	K5D102BLA013	FUSE	[M]
F1	K5D202BLA013	FUSE	[M] GS/GCS/GCT
F2	K5D102BLA013	FUSE	[M] GS/GCS/GCT
		FUSE HOLDERS	

Ref. No.	Part No.	Part Name & Description	Remarks
FC1	EYF52BCY	FUSE CLIP	[M]
FC2	EYF52BCY	FUSE CLIP	[M]
FC3	EYF52BCY	FUSE CLIP	[M]GS
FC4	EYF52BCY	FUSE CLIP	[M]GS
		FUSE PROTECTOR	
FP5100	K5G401A00008	RESISTOR	[M]
FP5950	K5G402A00025	FUSE PROTECTOR	[M]
		HOLDERS	
H5104	K1YF09000001	9P WIRE HOLDER	[M]
H6555	K1YZ09000002	9P CABLE HOLDER	[M]
H6556	K1YZ07000001	7P WIRE HOLDER	[M]GC/GS/GCS/GCT
H6900	K1KA07AA0193	7P CONNECTOR	[M]GC/GS/GCS/GCT
		JACKS	
JK2601	K4BC03A00008	JK ANTENNA	[M]
JK2800	K1CB105B0046	JK S-VIDEO	[M]
JK2801	K2HA1YYB0004	JK COXIAL	[M]
JK2803	K2HA4YYB0002	JK COMPONENT VIDEO OUT	[M]
JK5102	K4AC06B00008	JK SPEAKER	[M]
JK5950	K2AA2B000011	JK AC INLET	[M]
JK6551	K2HC103A0024	JK HP	[M]
JK6552	K2HC1YYA0002	JK MUSIC PORT	[M]
JK6901	K2HB102J0038	JK MIC 1	[M]GC/GS/GCS/GCT
JK6902	K2HB102J0038	JK MIC 2	[M]GC/GS/GCS/GCT
		EARTH TERMINALS	
E5100	K4CZ01000027	EARTH LUG	[M]
E5102	K4CZ01000027	EARTH LUG	[M]
		PACKING MATERIALS	
P1	RPGX1637	PACKING CASE	[M]GC
P1	RPGX1638	PACKING CASE	[M]GS
P1	RPGX1641	PACKING CASE	[M]GN
P1	RPGX1639	PACKING CASE	[M]GCS
P1	RPGX1640	PACKING CASE	[M]GCT
P2	RPNX0420	POLYFOAM UNIT	[M]
P3	RPFX0007-1	MIRAMAT BAG	[M]
		ACCESSORIES	
A1	N2QAYB000032	REMOTE CONTROLLER	[M]GC/GSGCS/GCT
A1	N2QAYB000033	REMOTE CONTROLLER	[M]GN
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CJ2DA00010	AC CORD	[M]GN
A2	K2CQ2CA00002	AC CORD	[M]GC/GS/GCS/GCT
A2	K2CT3CA00004	AC CORD	[M]GS

Ref. No.	Part No.	Part Name & Description	Remarks
A3	RQTV0141-L	O/I BOOK (En)	[M]GN/GCS/GCT
A3	RQTV0143-G	O/I BOOK (En/Pe/Ar)	[M]GC/GS
A3	RQTV0142-K	O/I BOOK (Cn)	[M]GCS
A4	RSA0007-L	FM ANTENNA WIRE	[M]
A5	N1DAAAA00001	AM LOOP ANTENNA	[M]
A6	K2KA2CA00011	VIDEO CABLE	[M]
		RESISTORS	
R2	D0AE101JA048	100 1/4W	[M]
R2	D0AE104JA048	100K 1/4W	[M]
R3	D0AE221JA048	220 1/4W	[M]
R4	D0AE104JA048	100K 1/4W	[M]
R5	ERDS2TJ564T	560K 1/4W	[M]
R6	D0AE391JA048	390 1/4W	[M]
R7	D0AE272JA048	2.7K 1/4W	[M]
R8	ERDS2TJ684T	680K 1/4W	[M]
R9	D0AE391JA048	390 1/4W	[M]
R10	D0AE391JA048	390 1/4W	[M]
R11	ERDS2TJ684T	680K 1/4W	[M]
R952	ERDS2TJ821T	820 1/4W	[M]
R953	ERDS2TJ393T	39K 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R1002	ERJ3GEY0R00V	0 1/16W	[M]
R1003	ERJ3GEYJ103V	10K 1/16W	[M]
R1004	D0GB152JA007	1.5K 1/16W	[M]
R1005	D0GB472JA041	4.7K 1/16W	[M]
R1007	ERD25FVJ4R7T	4.7 1/4W	[M]
R1009	D0GB183JA007	18K 1/16W	[M]
R1010	D0GB183JA007	18K 1/16W	[M]
R1011	ERJ3GEYJ822V	8.2K 1/16W	[M]
R1012	D0GB472JA041	4.7K 1/16W	[M]
R1013	D0GB472JA041	4.7K 1/16W	[M]
R1014	D0GB472JA041	4.7K 1/16W	[M]
R1015	D0GB470JA008	47 1/16W	[M]
R1016	D0GB470JA008	47 1/16W	[M]
R1017	ERJ3GEYJ822V	8.2K 1/16W	[M]
R1018	D0GB392JA007	3.9K 1/16W	[M]
R1019	D0GB392JA007	3.9K 1/16W	[M]
R1020	ERJ3GEY0R00V	0 1/16W	[M]
R1022	ERJ3GEYJ103V	10K 1/16W	[M]
R1024	ERJ3GEY0R00V	0 1/16W	[M]
R1025	ERJ3GEY0R00V	0 1/16W	[M]
R1026	ERJ3GEYJ102V	1K 1/16W	[M]
R1027	ERJ3GEY0R00V	0 1/16W	[M]
R1028	ERJ3GEYJ822V	8.2K 1/16W	[M]
R1029	D0GB475JA007	4.7M 1/16W	[M]
R1030	D0GB101JA007	100 1/16W	[M]
R1031	D0GB273JA007	27K 1/16W	[M]
R1032	ERJ3GEYJ103V	10K 1/16W	[M]
R1035	ERJ3GEYJ103V	10K 1/16W	[M]
R1040	ERJ3GEY0R00V	0 1/16W	[M]
R1049	ERJ3GEY0R00V	0 1/16W	[M]
R1050	ERJ3GEY0R00V	0 1/16W	[M]
R1055	D0GB222JA041	2.2K 1/16W	[M]
R1057	D0GB222JA041	2.2K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R1060	D0GB391JA041	390 1/16W	[M]
R1084	D0GB222JA041	2.2K 1/16W	[M]
R1085	D0GB473JA041	47K 1/16W	[M]
R1086	D0GB222JA041	2.2K 1/16W	[M]
R1087	D0GB473JA041	47K 1/16W	[M]
R1090	D0GB221JA041	220 1/16W	[M]
R1091	ERJ3GEY0R00V	0 1/16W	[M]
R1092	ERJ3GEY0R00V	0 1/16W	[M]
R1097	ERJ3GEYJ103V	10K 1/16W	[M]
R1098	ERJ3GEYJ103V	10K 1/16W	[M]
R1099	ERJ3GEY0R00V	0 1/16W	[M]
R1100	ERJ3GEY0R00V	0 1/16W	[M]
R1101	ERJ3GEY0R00V	0 1/16W	[M]
R1102	ERJ3GEYJ103V	10K 1/16W	[M]
R2001	ERJ3GEY0R00V	0 1/16W	[M]
R2002	ERJ3GEY0R00V	0 1/16W	[M]
R2003	ERJ3GEY0R00V	0 1/16W	[M]
R2004	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R2005	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R2007	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R2008	ERJ3GEY0R00V	0 1/16W	[M]
R2009	ERJ3GEY0R00V	0 1/16W	[M]
R2021	ERJ3GEY0R00V	0 1/16W	[M]
R2031	D0AF270JA039	27 1/4W	[M]
R2032	ERJ3GEYJ103V	10K 1/16W	[M]
R2033	D0GB472JA041	4.7K 1/16W	[M]
R2051	ERJ3GEYJ102V	1K 1/16W	[M]
R2052	ERJ3GEYJ103V	10K 1/16W	[M]
R2053	D0GB563JA007	56K 1/16W	[M]
R2054	D0GB273JA007	27K 1/16W	[M]
R2055	D0GB152JA007	1.5K 1/16W	[M]
R2056	D0GB152JA007	1.5K 1/16W	[M]
R2057	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2058	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2064	ERJ3GEYJ223V	22K 1/16W	[M]
R2067	D0GB332JA007	3.3K 1/16W	[M]
R2068	D0GB183JA007	18K 1/16W	[M]
R2069	ERJ3GEY0R00V	0 1/16W	[M]
R2070	ERJ3GEYJ821V	820 1/16W	[M]
R2071	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2072	ERJ3GEYJ102V	1K 1/16W	[M]
R2073	D0GB104JA007	100K 1/16W	[M]
R2074	D0GB473JA041	47K 1/16W	[M]
R2075	D0GB473JA041	47K 1/16W	[M]
R2076	D0GB222JA041	2.2K 1/16W	[M]
R2077	ERJ3GEYJ152V	1.5K 1/16W	[M]
R2078	ERJ3GEY0R00V	0 1/16W	[M]
R2081	ERJ3GEYJ102V	1K 1/16W	[M]
R2086	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2087	ERJ3GEYJ334V	330K 1/16W	[M]
R2101	D0GB332JA007	3.3K 1/16W	[M]GN
R2101	ERJ3GEYJ332V	3.3K 1/16W	[M]GC/GS/GCS/GCT
R2102	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2103	D0GB123JA007	12K 1/16W	[M]
R2104	ERJ3GEYJ103V	10K 1/16W	[M]
R2105	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2106	D0GB101JA007	100 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2107	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2108	D0GB123JA007	12K 1/16W	[M]
R2111	ERJ3GEYJ153V	15K 1/16W	[M]
R2112	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2113	D0GB562JA007	5.6K 1/16W	[M]
R2118	D0GB562JA007	5.6K 1/16W	[M]
R2120	ERJ3GEYJ102V	1K 1/16W	[M]
R2141	D0GB272JA007	2.7K 1/16W	[M]
R2142	D0GB152JA007	1.5K 1/16W	[M]
R2143	D0GB104JA007	100K 1/16W	[M]
R2145	ERJ3GEYJ103V	10K 1/16W	[M]
R2146	ERJ3GEYJ102V	1K 1/16W	[M]
R2149	D0GB222JA041	2.2K 1/16W	[M]
R2152	ERJ3GEYJ681V	680 1/16W	[M]
R2153	D0GB152JA007	1.5K 1/16W	[M]
R2154	D0GB104JA007	100K 1/16W	[M]
R2166	ERJ3GEYJ100V	10 1/16W	[M]
R2167	ERJ3GEYJ100V	10 1/16W	[M]
R2168	ERJ3GEYJ100V	10 1/16W	[M]
R2169	ERJ3GEYJ100V	10 1/16W	[M]
R2170	ERJ3GEY0R00V	0 1/16W	[M]
R2171	D0GB332JA007	3.3K 1/16W	[M]
R2172	D0GB561JA007	560 1/16W	[M]
R2191	ERJ3GEY0R00V	0 1/16W	[M]
R2192	ERJ3GEY0R00V	0 1/16W	[M]
R2197	ERJ3GEYJ103V	10K 1/16W	[M]
R2198	D0GB123JA007	12K 1/16W	[M]
R2199	D0GB153JA007	15K 1/16W	[M]
R2201	D0GB332JA007	3.3K 1/16W	[M]GN
R2201	ERJ3GEYJ332V	3.3K 1/16W	[M]GC/GS/GCS/GCT
R2202	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2204	ERJ3GEYJ103V	10K 1/16W	[M]
R2205	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2206	D0GB101JA007	100 1/16W	[M]
R2207	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2211	ERJ3GEYJ153V	15K 1/16W	[M]
R2212	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2220	ERJ3GEYJ102V	1K 1/16W	[M]
R2241	D0GB272JA007	2.7K 1/16W	[M]
R2242	D0GB152JA007	1.5K 1/16W	[M]
R2243	D0GB104JA007	100K 1/16W	[M]
R2245	ERJ3GEYJ103V	10K 1/16W	[M]
R2246	ERJ3GEYJ102V	1K 1/16W	[M]
R2247	D0GB104JA007	100K 1/16W	[M]
R2248	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2249	D0GB222JA041	2.2K 1/16W	[M]
R2252	ERJ3GEYJ681V	680 1/16W	[M]
R2253	D0GB152JA007	1.5K 1/16W	[M]
R2254	D0GB104JA007	100K 1/16W	[M]
R2266	ERJ3GEYJ100V	10 1/16W	[M]
R2267	ERJ3GEYJ100V	10 1/16W	[M]
R2268	ERJ3GEYJ100V	10 1/16W	[M]
R2269	ERJ3GEYJ100V	10 1/16W	[M]
R2270	ERJ3GEY0R00V	0 1/16W	[M]
R2271	D0GB332JA007	3.3K 1/16W	[M]
R2272	D0GB561JA007	560 1/16W	[M]
R2291	ERJ3GEY0R00V	0 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2292	ERJ3GEY0R00V	0 1/16W	[M]
R2297	ERJ3GEYJ103V	10K 1/16W	[M]
R2298	D0GB123JA007	12K 1/16W	[M]
R2299	D0GB153JA007	15K 1/16W	[M]
R2302	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2303	D0GB104JA007	100K 1/16W	[M]
R2312	ERJ3GEYJ683V	68K 1/16W	[M]
R2313	D0GB683JA007	68K 1/16W	[M]
R2314	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS/GCS/GCT
R2315	ERJ3GEY0R00V	0 1/16W	[M]GN
R2315	ERJ3GEYJ222V	2.2K 1/16W	[M]GC/GS/GCS/GCT
R2316	D0GB272JA007	2.7K 1/16W	[M]
R2317	D0GB104JA007	100K 1/16W	[M]
R2318	D0GB272JA007	2.7K 1/16W	[M]
R2319	D0GB562JA007	5.6K 1/16W	[M]
R2320	ERJ3GEYJ102V	1K 1/16W	[M]
R2331	ERJ3GEY0R00V	0 1/16W	[M]
R2332	D0GB393JA007	39K 1/16W	[M]
R2333	ERJ3GEY0R00V	0 1/16W	[M]
R2337	D0GB474JA041	470K 1/16W	[M]
R2338	ERJ3GEYJ102V	1K 1/16W	[M]
R2339	ERJ3GEYJ102V	1K 1/16W	[M]
R2402	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2403	D0GB104JA007	100K 1/16W	[M]
R2412	ERJ3GEYJ683V	68K 1/16W	[M]
R2413	D0GB683JA007	68K 1/16W	[M]
R2414	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS
R2415	ERJ3GEY0R00V	0 1/16W	[M]GN
R2415	ERJ3GEYJ222V	2.2K 1/16W	[M]GC/GS/GCS/GCT
R2416	D0GB272JA007	2.7K 1/16W	[M]
R2417	D0GB104JA007	100K 1/16W	[M]
R2418	D0GB272JA007	2.7K 1/16W	[M]
R2419	D0GB562JA007	5.6K 1/16W	[M]
R2420	ERJ3GEYJ102V	1K 1/16W	[M]
R2422	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R2439	ERJ3GEYJ102V	1K 1/16W	[M]
R2501	D0GB222JA041	2.2K 1/16W	[M]
R2502	D0GB563JA007	56K 1/16W	[M]
R2503	D0GB273JA007	27K 1/16W	[M]
R2532	ERJ3GEY0R00V	0 1/16W	[M]
R2551	D0GB1R0JA007	1 1/16W	[M]
R2552	D0GB1R0JA007	1 1/16W	[M]
R2553	D0GB1R0JA007	1 1/16W	[M]
R2554	D0GB1R0JA007	1 1/16W	[M]
R2555	D0GB1R0JA007	1 1/16W	[M]
R2556	ERJ3GEYJ102V	1K 1/16W	[M]
R2557	ERJ3GEYJ102V	1K 1/16W	[M]
R2558	D0GB331JA007	330 1/16W	[M]
R2559	D0GB392JA007	3.9K 1/16W	[M]
R2560	ERJ3GEYJ103V	10K 1/16W	[M]
R2562	D0GB221JA041	220 1/16W	[M]
R2563	D0GB392JA007	3.9K 1/16W	[M]
R2568	ERJ3GEYJ102V	1K 1/16W	[M]
R2576	D0GB472JA041	4.7K 1/16W	[M]
R2577	D0GB393JA007	39K 1/16W	[M]
R2578	D0GB153JA007	15K 1/16W	[M]
R2579	D0GB473JA041	47K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2582	ERJ3GEY0R00V	0 1/16W	[M]
R2584	D0GB334JA007	330K 1/16W	[M]
R2585	D0GB334JA007	330K 1/16W	[M]
R2586	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2587	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2591	D0GB334JA007	330K 1/16W	[M]
R2592	ERJ3GEY0R00V	0 1/16W	[M]
R2601	ERJ3GEY0R00V	0 1/16W	[M]
R2602	D0GB472JA041	4.7K 1/16W	[M]
R2603	D0GB271JA007	270 1/16W	[M]
R2604	ERJ3GEYJ102V	1K 1/16W	[M]
R2605	D0GB471JA041	470 1/16W	[M]
R2606	D0GB474JA041	470K 1/16W	[M]
R2607	D0GB331JA007	330 1/16W	[M]
R2610	ERJ3GEYJ102V	1K 1/16W	[M]
R2611	D0GB391JA041	390 1/16W	[M]
R2612	D0GB104JA007	100K 1/16W	[M]
R2613	ERJ3GEYJ103V	10K 1/16W	[M]
R2614	D0GB562JA007	5.6K 1/16W	[M]
R2615	D0GB561JA007	560 1/16W	[M]
R2616	ERJ3GEYJ102V	1K 1/16W	[M]
R2617	D0GB473JA041	47K 1/16W	[M]
R2618	D0GB332JA007	3.3K 1/16W	[M]
R2619	D0GB472JA041	4.7K 1/16W	[M]
R2620	D0GB473JA041	47K 1/16W	[M]
R2621	D0GB223JA041	22K 1/16W	[M]
R2622	D0GB272JA007	2.7K 1/16W	[M]
R2623	D0GB683JA007	68K 1/16W	[M]
R2624	D0GB330JA007	33 1/16W	[M]
R2625	D0GB471JA041	470 1/16W	[M]
R2626	ERJ3GEYJ102V	1K 1/16W	[M]
R2627	D0GB471JA041	470 1/16W	[M]
R2628	ERJ3GEYJ820V	82 1/16W	[M]
R2629	D0GB273JA007	27K 1/16W	[M]
R2630	ERJ3GEYJ103V	10K 1/16W	[M]
R2631	D0GB121JA007	120 1/16W	[M]
R2632	ERJ3GEYJ103V	10K 1/16W	[M]
R2633	ERJ3GEYJ102V	1K 1/16W	[M]
R2634	D0GB471JA041	470 1/16W	[M]
R2635	ERJ3GEYJ102V	1K 1/16W	[M]
R2636	ERJ3GEYJ102V	1K 1/16W	[M]
R2637	ERJ3GEYJ102V	1K 1/16W	[M]
R2638	D0GB332JA007	3.3K 1/16W	[M]
R2641	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2642	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2643	D0GB223JA041	22K 1/16W	[M]
R2644	D0GB121JA007	120 1/16W	[M]
R2645	D0GB104JA007	100K 1/16W	[M]
R2646	D0GB104JA007	100K 1/16W	[M]
R2651	ERJ3GEYJ820V	82 1/16W	[M]
R2652	ERJ3GEY0R00V	0 1/16W	[M]
R2801	ERJ3GEYJ103V	10K 1/16W	[M]
R2802	D0GB101JA007	100 1/16W	[M]
R2803	ERJ3GEYJ103V	10K 1/16W	[M]
R2804	D0GB473JA041	47K 1/16W	[M]
R2805	D0GB473JA041	47K 1/16W	[M]
R2806	ERJ3GEYJ103V	10K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2807	ERJ3GEYJ103V	10K 1/16W	[M]
R2810	D0GB223JA041	22K 1/16W	[M]
R2811	ERJ3GEY0R00V	0 1/16W	[M]
R2817	D0GB104JA007	100K 1/16W	[M]
R2818	D0GB104JA007	100K 1/16W	[M]
R2819	D0GB104JA007	100K 1/16W	[M]
R2827	ERJ3GEYJ103V	10K 1/16W	[M]GN
R2828	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS/GCS/GCT
R2831	ERJ3GEYJ103V	10K 1/16W	[M]
R2834	ERJ3GEYJ102V	1K 1/16W	[M]
R2835	D0GB101JA007	100 1/16W	[M]
R2836	D0GB101JA007	100 1/16W	[M]
R2837	D0GB101JA007	100 1/16W	[M]
R2838	D0GB101JA007	100 1/16W	[M]
R2839	D0GB101JA007	100 1/16W	[M]
R2840	ERJ3GEY0R00V	0 1/16W	[M]
R2841	ERJ3GEYJ103V	10K 1/16W	[M]
R2842	ERJ3GEYJ103V	10K 1/16W	[M]
R2844	ERJ3GEYJ103V	10K 1/16W	[M]
R2845	ERJ3GEYJ103V	10K 1/16W	[M]
R2846	D0GB472JA041	4.7K 1/16W	[M]
R2849	D0GB101JA007	100 1/16W	[M]
R2850	D0GB101JA007	100 1/16W	[M]
R2851	D0GB101JA007	100 1/16W	[M]
R2852	D0GB101JA007	100 1/16W	[M]
R2854	D0GB473JA041	47K 1/16W	[M]
R2856	ERJ3GEYJ102V	1K 1/16W	[M]
R2858	D0GB101JA007	100 1/16W	[M]
R2859	D0GB101JA007	100 1/16W	[M]
R2860	D0GB101JA007	100 1/16W	[M]
R2861	D0GB101JA007	100 1/16W	[M]
R2862	D0GB101JA007	100 1/16W	[M]
R2863	D0GB101JA007	100 1/16W	[M]
R2869	D0GB473JA041	47K 1/16W	[M]
R2870	D0GB473JA041	47K 1/16W	[M]
R2871	D0GB473JA041	47K 1/16W	[M]
R2872	D0GB473JA041	47K 1/16W	[M]
R2873	D0GB473JA041	47K 1/16W	[M]
R2874	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS
R2874	ERJ3GEYJ682V	6.8K 1/16W	[M]GN
R2874	D0GB332JA007	3.3K 1/16W	[M]GCS/GCT
R2875	ERJ3GEYJ103V	10K 1/16W	[M]
R2876	D0GB223JA041	22K 1/16W	[M]
R2877	D0GB223JA041	22K 1/16W	[M]
R2878	D0GB472JA041	4.7K 1/16W	[M]
R2881	D0GB221JA041	220 1/16W	[M]
R2882	D0GB106JA007	10M 1/16W	[M]
R2883	D0GB334JA007	330K 1/16W	[M]
R2884	D0GB473JA041	47K 1/16W	[M]
R2886	D0GB105JA007	1M 1/16W	[M]
R2887	ERJ3GEYJ102V	1K 1/16W	[M]
R2888	ERJ3GEYJ102V	1K 1/16W	[M]
R2889	ERJ3GEYJ102V	1K 1/16W	[M]
R2890	ERJ3GEY0R00V	0 1/16W	[M]
R2891	D0GB473JA041	47K 1/16W	[M]
R2892	ERJ3GEY0R00V	0 1/16W	[M]
R2894	ERJ3GEYJ102V	1K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2895	D0GB101JA007	100 1/16W	[M]
R2901	D0HB750ZA003	75 3W	[M]
R2902	D0HB750ZA003	75 3W	[M]
R2903	D0HB750ZA003	75 3W	[M]
R2906	D0GB104JA007	100K 1/16W	[M]
R2907	D0GB104JA007	100K 1/16W	[M]
R2908	D0GB104JA007	100K 1/16W	[M]
R2909	D0HB750ZA003	75 3W	[M]
R2910	D0HB750ZA003	75 3W	[M]
R2911	ERJ3GEY0R00V	0 1/16W	[M]
R2912	D0GB222JA041	2.2K 1/16W	[M]
R2913	ERJ3GEYJ103V	10K 1/16W	[M]
R2914	ERJ3GEYJ103V	10K 1/16W	[M]
R2915	D0HB750ZA003	75 3W	[M]
R2920	D0GB104JA007	100K 1/16W	[M]
R2921	D0GB104JA007	100K 1/16W	[M]
R2922	D0GB104JA007	100K 1/16W	[M]
R2931	ERJ3GEY0R00V	0 1/16W	[M]
R2932	ERJ3GEY0R00V	0 1/16W	[M]
R2934	ERJ3GEY0R00V	0 1/16W	[M]
R2935	ERJ3GEY0R00V	0 1/16W	[M]
R2936	ERJ3GEY0R00V	0 1/16W	[M]
R2937	ERJ3GEY0R00V	0 1/16W	[M]
R2938	ERJ3GEY0R00V	0 1/16W	[M]
R2940	ERJ3GEY0R00V	0 1/16W	[M]
R2941	ERJ3GEYJ103V	10K 1/16W	[M]
R2942	ERJ3GEY0R00V	0 1/16W	[M]
R2943	ERJ3GEY0R00V	0 1/16W	[M]
R2944	D0GB472JA041	4.7K 1/16W	[M]
R2945	ERJ3GEYJ103V	10K 1/16W	[M]
R2946	D0GB563JA007	56K 1/16W	[M]
R2947	D0AF270JA039	27 1/4W	[M]
R2948	D0GB101JA007	100 1/16W	[M]
R2949	ERJ3GEYJ473V	47K 1/16W	[M]
R2950	ERJ3GEYJ102V	1K 1/16W	[M]
R2952	ERJ3GEYJ473V	47K 1/16W	[M]
R2953	ERJ3GEYJ824V	820K 1/16W	[M]
R2954	ERJ3GEYJ103V	10K 1/16W	[M]
R2955	D0GB562JA007	5.6K 1/16W	[M]
R2956	ERJ3GEYJ103V	10K 1/16W	[M]
R2970	ERJ3GEYJ103V	10K 1/16W	[M]
R2971	ERJ3GEYJ750V	75 1/16W	[M]
R2972	D0GB221JA041	220 1/16W	[M]
R2973	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2974	ERJ3GEYJ102V	1K 1/16W	[M]
R2975	ERJ3GEYJ102V	1K 1/16W	[M]GC/GN/GS
R2976	ERJ3GEY0R00V	0 1/16W	[M]
R2977	ERJ3GEY0R00V	0 1/16W	[M]
R2987	ERJ3GEY0R00V	0 1/16W	[M]
R2991	ERJ3GEY0R00V	0 1/16W	[M]
R5101	ERJ3GEYJ103V	10K 1/16W	[M]
R5103	ERG1SJ103E	10K 1W	[M]
R5105	ERJ3GEYJ103V	10K 1/16W	[M]
R5106	D0GB223JA041	22K 1/16W	[M]
R5107	D0GB561JA007	560 1/16W	[M]
R5108	D0GB470JA008	47 1/16W	[M]
R5109	ERJ3GEYJ102V	1K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R5110	D0GB222JA041	2.2K 1/16W	[M]
R5111	D0GB104JA007	100K 1/16W	[M]
R5112	D0GB473JA041	47K 1/16W	[M]
R5113	D0GB473JA041	47K 1/16W	[M]
R5114	ERJ3GEYJ2R7V	2.7 1/16W	[M]
R5122	D0AF4R7JA039	4.7 1/4W	[M]
R5123	D0AF4R7JA039	4.7 1/4W	[M]
R5126	ERJ3GEYJ102V	1K 1/16W	[M]
R5127	D0GB471JA041	470 1/16W	[M]
R5130	D0GB151JA007	150 1/16W	[M]
R5131	ERDS1FVJ222T	2.2K 1/2W	[M]
R5132	D0AF331JA039	330 1/4W	[M]
R5133	ERJ3GEYJ103V	10K 1/16W	[M]
R5134	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5135	D0AE2R2JA048	2.2 1/4W	[M]
R5136	D0AE2R2JA048	2.2 1/4W	[M]
R5137	D0AE2R2JA048	2.2 1/4W	[M]
R5138	ERJ8GEYJ100V	10 1/8W	[M]
R5139	ERJ8GEYJ100V	10 1/8W	[M]
R5142	ERJ8GEYJ100V	10 1/8W	[M]
R5143	ERJ8GEYJ100V	10 1/8W	[M]
R5144	D0AF120JA039	12 1/4W	[M]
R5146	ERJ3GEYJ102V	1K 1/16W	[M]
R5147	D0AF2R2JA039	2.2 1/4W	[M]
R5148	ERJ3GEYJ102V	1K 1/16W	[M]
R5149	ERJ3GEYJ102V	1K 1/16W	[M]
R5150	D0GB224JA007	220K 1/16W	[M]
R5152	ERJ3GEY0R00V	0 1/16W	[M]
R5153	D0GB101JA007	100 1/16W	[M]
R5154	D0GB101JA007	100 1/16W	[M]
R5155	D0GB101JA007	100 1/16W	[M]
R5156	D0GB101JA007	100 1/16W	[M]
R5157	D0GB104JA007	100K 1/16W	[M]
R5201	ERJ3GEYJ102V	1K 1/16W	[M]
R5202	D0GB104JA007	100K 1/16W	[M]
R5203	ERJ3GEYJ103V	10K 1/16W	[M]
R5204	D0GB104JA007	100K 1/16W	[M]
R5205	D0GB104JA007	100K 1/16W	[M]
R5206	D0GB105JA007	1M 1/16W	[M]
R5207	ERJ3GEYJ682V	6.8K 1/16W	[M]
R5208	D0GB220JA007	22 1/16W	[M]
R5209	D0GB100JA007	10 1/16W	[M]
R5210	D0GB151JA007	150 1/16W	[M]
R5301	D0GB562JA007	5.6K 1/16W	[M]
R5302	D0GB562JA007	5.6K 1/16W	[M]
R5303	D0GB562JA007	5.6K 1/16W	[M]
R5304	D0GB562JA007	5.6K 1/16W	[M]
R5305	ERG1SJ220E	22 1W	[M]
R5306	ERG1SJ220E	22 1W	[M]
R5307	ERJ8GEYJ100V	10 1/8W	[M]
R5308	ERJ8GEYJ100V	10 1/8W	[M]
R5313	D0GB154JA007	150K 1/16W	[M]
R5317	ERJ3GEYJ103V	10K 1/16W	[M]
R5318	ERDS1FVJ562T	5.6K 1/2W	[M]
R5326	ERJ3GEY0R00V	0 1/16W	[M]
R5329	ERJ3GEY0R00V	0 1/16W	[M]
R5413	D0GB104JA007	100K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R5418	ERDS1FVJ562T	5.6K 1/2W	[M]
R5501	D0GB562JA007	5.6K 1/16W	[M]
R5502	D0GB562JA007	5.6K 1/16W	[M]
R5506	ERG1SJ220E	22 1W	[M]
R5507	ERJ8GEYJ100V	10 1/8W	[M]
R5513	D0GB334JA007	330K 1/16W	[M]
R5514	ERJ3GEY0R00V	0 1/16W	[M]
R5519	ERJ3GEY0R00V	0 1/16W	[M]
R5520	ERJ3GEY0R00V	0 1/16W	[M]
R5525	ERDS1FVJ562T	5.6K 1/2W	[M]
R5526	D0GB472JA007	4.7K 1/16W	[M]
R5529	ERJ3GEY0R00V	0 1/16W	[M]
R5715	D0GB332JA007	3.3K 1/16W	[M]
R5716	D0AF270JA039	27 1/4W	[M]
R5717	D0GB101JA007	100 1/16W	[M]
R5718	D0GB272JA007	2.7K 1/16W	[M]
R5719	D0GB471JA041	470 1/16W	[M]
R5720	D0GB272JA007	2.7K 1/16W	[M]
R5721	D0GB332JA007	3.3K 1/16W	[M]
R5722	ERDS1FVJ101T	100 1/2W	[M]
R5723	ERDS1FVJ101T	100 1/2W	[M]
R5951	D0AE332JA048	3.3K 1/4W	[M]
R5952	D0AE152JA048	1.5K 1/4W	[M]GS/GCS/GCT
R5953	D0AE151JA048	150 1/4W	[M]GC/GN
R5954	D0AE824JA048	820K 1/4W	[M]GS/GCS/GCT
R5955	D0AE122JA048	1.2K 1/4W	[M]GS/GCS/GCT
R5955	D0AE222JA048	2.2K 1/4W	[M]GC/GN
R5957	D0AE103JA048	10K 1/4W	[M]
R5958	D0AE103JA048	10K 1/4W	[M]
R5960	D0AE472JA048	4.7K 1/4W	[M]
R5961	D0AE151JA048	150 1/4W	[M]
R5963	D0AF820JA039	82 1/4W	[M]
R6102	ERJ3GEYJ102V	1K 1/16W	[M]
R6103	ERJ3GEYJ102V	1K 1/16W	[M]
R6104	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6105	D0GB182JA007	1.8K 1/16W	[M]
R6106	D0GB222JA041	2.2K 1/16W	[M]
R6108	D0GB272JA007	2.7K 1/16W	[M]
R6199	ERJ3GEYJ103V	10K 1/16W	[M]
R6202	ERJ3GEYJ102V	1K 1/16W	[M]
R6203	ERJ3GEYJ102V	1K 1/16W	[M]
R6204	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6205	D0GB182JA007	1.8K 1/16W	[M]
R6206	D0GB222JA041	2.2K 1/16W	[M]
R6207	D0GB272JA007	2.7K 1/16W	[M]
R6208	D0GB472JA041	4.7K 1/16W	[M]
R6209	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6210	ERJ3GEYJ103V	10K 1/16W	[M]
R6211	D0GB223JA041	22K 1/16W	[M]
R6301	ERJ3GEYJ103V	10K 1/16W	[M]
R6303	ERJ3GEYJ102V	1K 1/16W	[M]
R6304	ERJ3GEYJ102V	1K 1/16W	[M]
R6305	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6306	D0GB182JA007	1.8K 1/16W	[M]
R6307	D0GB222JA041	2.2K 1/16W	[M]
R6308	D0GB272JA007	2.7K 1/16W	[M]
R6309	D0GB472JA041	4.7K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R6310	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6311	ERJ3GEYJ103V	10K 1/16W	[M]
R6312	D0GB223JA041	22K 1/16W	[M]
R6313	D0GB683JA007	68K 1/16W	[M]
R6401	ERJ3GEYJ103V	10K 1/16W	[M]
R6402	ERJ3GEYJ103V	10K 1/16W	[M]
R6403	ERJ3GEYJ2R7V	2.7 1/16W	[M]
R6404	ERJ3GEYJ2R7V	2.7 1/16W	[M]
R6405	D0GB274JA007	270K 1/16W	[M]
R6406	D0GB274JA007	270K 1/16W	[M]
R6411	D0GB223JA041	22K 1/16W	[M]
R6412	ERJ3GEYJ102V	1K 1/16W	[M]
R6415	D0GB223JA041	22K 1/16W	[M]
R6416	ERJ3GEYJ102V	1K 1/16W	[M]
R6421	ERJ3GEYJ103V	10K 1/16W	[M]
R6425	ERJ3GEYJ103V	10K 1/16W	[M]
R6458	ERJ3GEYJ392V	3.9K 1/16W	[M]
R6481	D0GB270JA007	27 1/16W	[M]
R6491	D0GB473JA041	47K 1/16W	[M]
R6492	D0GB473JA041	47K 1/16W	[M]
R6493	ERJ3GEYJ103V	10K 1/16W	[M]
R6601	D0GB471JA041	470 1/16W	[M]
R6603	D0GB221JA041	220 1/16W	[M]
R6604	D0GB221JA041	220 1/16W	[M]
R6605	D0GB823JA007	82K 1/16W	[M]
R6631	ERD2FCVG470T	47 1/4W	[M]
R6632	ERD2FCVG470T	47 1/4W	[M]
R6702	ERJ3GEYJ102V	1K 1/16W	[M]
R6703	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6710	ERJ3GEYJ102V	1K 1/16W	[M]
R6712	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6713	ERJ3GEYJ102V	1K 1/16W	[M]
R6714	ERJ3GEYJ102V	1K 1/16W	[M]
R6900	ERJ3GEY0R00V	0 1/16W	[M]
R6901	ERJ3GEYJ681V	680 1/16W	[M]GC/GS/GCS/GCT
R6902	ERJ3GEYJ681V	680 1/16W	[M]GC/GS/GCS/GCT
R6903	D0GB561JA007	560 1/16W	[M]GC/GS/GCS/GCT
R6904	D0GB222JA041	2.2K 1/16W	[M]GC/GS/GCS/GCT
R6905	D0GB474JA041	470K 1/16W	[M]GC/GS/GCS/GCT
R6906	ERJ3GEYJ822V	8.2K 1/16W	[M]GC/GS/GCS/GCT
R6907	D0GB334JA007	330K 1/16W	[M]GC/GS/GCS/GCT
R6908	D0GB680JA007	68 1/16W	[M]GC/GS/GCS/GCT
R6909	D0GB334JA007	330K 1/16W	[M]GC/GS/GCS/GCT
R6910	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6911	D0GB101JA007	100 1/16W	[M]GC/GS/GCS/GCT
R6912	D0GB273JA007	27K 1/16W	[M]GC/GS/GCS/GCT
R6913	D0GB331JA007	330 1/16W	[M]GC/GS/GCS/GCT
R6914	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R6915	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6916	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6917	D0GB272JA007	2.7K 1/16W	[M]GC/GS/GCS/GCT
R6918	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6919	ERJ3GEYJ102V	1K 1/16W	[M]GC/GS/GCS/GCT
R6920	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6921	D0GB390JA041	39 1/16W	[M]GC/GS/GCS/GCT
R6922	D0GB390JA041	39 1/16W	[M]GC/GS/GCS/GCT
R6923	D0GB124JA007	120K 1/16W	[M]GC/GS/GCS/GCT

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R6924	D0GB153JA007	15K 1/16W	[M]GC/GS/GCS/GCT
R6925	D0GB153JA007	15K 1/16W	[M]GC/GS/GCS/GCT
R6926	D0GB153JA007	15K 1/16W	[M]GC/GS/GCS/GCT
R6927	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6928	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6929	ERJ3GEYJ822V	8.2K 1/16W	[M]GC/GS/GCS/GCT
R6930	D0GB273JA007	27K 1/16W	[M]GC/GS/GCS/GCT
R6931	D0GB181JA007	180 1/16W	[M]GC/GS/GCS/GCT
R6933	D0GB151JA007	150 1/16W	[M]GC/GS/GCS/GCT
R6934	D0GB470JA008	47 1/16W	[M]GC/GS/GCS/GCT
R6935	ERJ3GEY0R00V	0 1/16W	[M]GC/GS/GCS/GCT
R6937	ERJ3GEYJ102V	1K 1/16W	[M]GC/GS/GCS/GCT
R6938	ERJ3GEYJ102V	1K 1/16W	[M]GC/GS/GCS/GCT
R6940	D0GB183JA007	18K 1/16W	[M]GC/GS/GCS/GCT
R6941	D0GB153JA007	15K 1/16W	[M]GC/GS/GCS/GCT
R6942	D0GB153JA007	15K 1/16W	[M]GC/GS/GCT
R6943	D0GB153JA007	15K 1/16W	[M]GC/GS/GCS/GCT
R6944	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS/GCS/GCT
R6945	D0GB562JA007	5.6K 1/16W	[M]GC/GS/GCS/GCT
R6946	D0GB390JA041	39 1/16W	[M]GC/GS/GCS/GCT
R6947	D0GB472JA041	4.7K 1/16W	[M]GC/GS/GCS/GCT
R6948	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS/GCS/GCT
R6949	ERJ3GEYJ103V	10K 1/16W	[M]GC/GS/GCS/GCT
R6950	ERJ3GEYJ102V	1K 1/16W	[M]
R6951	D0GB562JA007	5.6K 1/16W	[M]GC/GS/GCS/GCT
R6952	D0GB562JA007	5.6K 1/16W	[M]GC/GS/GCS/GCT
R6954	D0GB473JA041	47K 1/16W	[M]
R6956	D0GB472JA041	4.7K 1/16W	[M]
R6957	D0GB474JA041	470K 1/16W	[M]
R6959	ERJ3GEY0R00V	0 1/16W	[M]
R6960	ERJ3GEY0R00V	0 1/16W	[M]
R8003	ERJ2GEJ473X	47K 2W	[M]
R8011	ERJ2GEJ220X	22 2W	[M]
R8012	ERJ2GEJ220X	22 2W	[M]
R8013	ERJ2GEJ220X	22 2W	[M]
R8041	ERJ2GEJ330X	33 2W	[M]
R8153	ERJ2RHD621X	620 2W	[M]
R8154	ERJ2RHD102X	1K 2W	[M]
R8211	ERJ2GEJ103X	10K 2W	[M]
R8221	ERJ2GEJ822X	8.2K 2W	[M]
R8225	ERJ2GEJ822X	8.2K 2W	[M]
R8230	ERJ2GEJ222X	2.2K 2W	[M]
R8231	ERJ2GEJ223X	22K 2W	[M]
R8232	ERJ2GEJ752X	7.5K 2W	[M]
R8251	ERJ6GEYJ6R8V	6.8 1/10W	[M]
R8261	ERJ2GEJ823X	82K 2W	[M]
R8262	ERJ2GEJ153X	15K 2W	[M]
R8263	ERJ2GEJ823X	82K 2W	[M]
R8264	ERJ2GEJ153X	15K 2W	[M]
R8311	ERJ2RHD242X	2.4K 2W	[M]
R8312	ERJ2RHD102X	1K 2W	[M]
R8313	ERJ2RHD912X	9.1K 2W	[M]
R8314	ERJ2GE0R00X	0 2W	[M]
R8321	ERJ3RED680V	68 3W	[M]
R8322	ERJ3GEY0R00V	0 1/16W	[M]
R8325	ERJ3RED680V	68 3W	[M]
R8326	ERJ3GEY0R00V	0 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R8331	ERJ3RED680V	68 3W	[M]
R8332	ERJ3GEY0R00V	0 1/16W	[M]
R8335	ERJ3RED680V	68 3W	[M]
R8341	ERJ3RED680V	68 3W	[M]
R8401	ERJ2GEJ101X	100 2W	[M]
R8420	ERJ2GEJ222X	2.2K 2W	[M]
R8421	ERJ2GE0R00X	0 2W	[M]
R8531	ERJ2GEJ152X	1.5K 2W	[M]
R8532	ERJ2GEJ222X	2.2K 2W	[M]
R8533	ERJ2GE0R00X	0 2W	[M]
R8541	ERJ2GEJ153X	15K 2W	[M]
R8551	ERJ2GE0R00X	0 2W	[M]
R8552	ERJ2GEJ102X	1K 2W	[M]
R8553	ERJ2GEJ102X	1K 2W	[M]
R8554	ERJ2GEJ680X	68 2W	[M]
R8555	ERJ2GEJ2R2X	2.2 2W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ2GEJ473X	47K 2W	[M]
R8559	ERJ2GEJ153X	15K 2W	[M]
R8561	ERJ2GE0R00X	0 2W	[M]
R8562	ERJ2GEJ102X	1K 2W	[M]
R8563	ERJ2GEJ102X	1K 2W	[M]
R8564	ERJ2GEJ220X	22 2W	[M]
R8565	ERJ2GEJ2R2X	2.2 2W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ2GEJ473X	47K 2W	[M]
R8601	ERJ2GEJ104X	100K 2W	[M]
R8611	ERJ2GEJ101X	100 2W	[M]
R8621	ERJ2GEJ105X	1M 2W	[M]
R8622	ERJ2RHD102X	1K 2W	[M]
		CHIP JUMPERS	
W2000	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2001	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2002	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2003	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2161	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2821	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2825	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2832	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2833	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2834	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2835	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2839	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2840	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2842	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2903	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2908	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2909	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2911	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2912	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2913	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2918	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2919	ERJ3GEY0R00V	CHIP JUMPER	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
W2926	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2940	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2941	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2942	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2943	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2944	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2958	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2961	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2962	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2972	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2973	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2974	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2975	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2989	ERJ3GEY0R00V	CHIP JUMPER	[M]
W3002	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5500	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5501	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5502	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5503	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5504	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5505	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5519	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6800	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6801	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6802	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6803	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6804	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6805	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6806	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6807	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6808	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6809	ERJ3GEY0R00V	CHIP JUMPER	[M]
W6811	ERJ3GEY0R00V	CHIP JUMPER	[M]
RX8001	D1H410320002	CHIP RESISTOR	[M]
RX8011	D1H88204A024	CHIP RESISTOR	[M]
RX8012	D1H88204A024	CHIP RESISTOR	[M]
RX8013	D1H88204A024	CHIP RESISTOR	[M]
RX8014	D1H88204A024	CHIP RESISTOR	[M]
RX8015	D1H88204A024	CHIP RESISTOR	[M]
RX8016	D1H88204A024	CHIP RESISTOR	[M]
RX8017	D1H88204A024	CHIP RESISTOR	[M]
RX8018	D1H422020001	CHIP RESISTOR	[M]
RX8019	D1H422020001	CHIP RESISTOR	[M]
RX8020	D1H422020001	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8111	D1H422320002	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8403	D1H410120001	CHIP RESISTOR	[M]
RX8531	D1H456020001	CHIP RESISTOR	[M]
RX8532	D1H85604A024	CHIP RESISTOR	[M]
RX8533	D1H456020001	CHIP RESISTOR	[M]
RX8534	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
RX8691	D1H410320002	CHIP RESISTOR	[M]
K2111	ERJ3GEY0R00V	CHIP JUMPER	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
K2211	ERJ3GEY0R00V	CHIP JUMPER	[M]
K6902	ERJ3GEY0R00V	CHIP JUMPER	[M]GN
K8003	ERJ2GE0R00X	CHIP JUMPER	[M]GC/GN/GS
K8004	ERJ2GE0R00X	CHIP JUMPER	[M]GCS/GCT
K8008	ERJ2GE0R00X	CHIP JUMPER	[M]
K8009	ERJ2GE0R00X	CHIP JUMPER	[M]GCS/GCT
K8251	ERJ3GEY0R00V	CHIP JUMPER	[M]
K8321	ERJ2GE0R00X	CHIP JUMPER	[M]
K8325	ERJ2GE0R00X	CHIP JUMPER	[M]
K8331	ERJ2GE0R00X	CHIP JUMPER	[M]
K8335	ERJ2GE0R00X	CHIP JUMPER	[M]
K8341	ERJ2GE0R00X	CHIP JUMPER	[M]
K8421	ERJ3GEY0R00V	CHIP JUMPER	[M]
		CAPACITORS	
C1	F1D1H5R6A017	5.6P 50V	[M]
C2	F1D1H102A029	1000P 50V	[M]
C3	F1D1H2R2A017	2.2P 50V	[M]
C4	F1D1H181A012	180P 50V	[M]
C5	F1D1H5R6A017	5.6P 50V	[M]
C6	F1D1H3R3A017	3.3P 50V	[M]
C7	F1D1H4R7A017	4.7P 50V	[M]
C8	F1D1H3R3A017	3.3P 50V	[M]
C9	F1D1H2R2A017	2.2P 50V	[M]
C10	F1D1H180A015	18P 50V	[M]
C11	F1D1H102A029	1000P 50V	[M]
C1002	ECEA1HKN2R2B	2.2 50V	[M]
C1006	ECA1HAK010XB	1 50V	[M]
C1007	F0A2A472A034	4700P 100V	[M]
C1008	ECA1HAK010XB	1 50V	[M]
C1009	ECA1CAK470XB	47 16V	[M]
C1010	ECA1EAM101XB	100 25V	[M]
C1011	ECQV1H473JL3	0.047 50V	[M]
C1012	F1H1H102A219	1000P 50V	[M]
C1013	F1H1H102A219	1000P 50V	[M]
C1014	F1H1H102A219	1000P 50V	[M]
C1015	F1H1H102A219	1000P 50V	[M]
C1016	F1H1H222A013	2200P 50V	[M]
C1017	F1H1H222A013	2200P 50V	[M]
C1018	F1H1H332A013	3300P 50V	[M]
C1019	F1H1H102A219	1000P 50V	[M]
C1020	F1H1H471A219	470P 50V	[M]
C1021	F1H1H471A219	470P 50V	[M]
C1022	F1H1H102A219	1000P 50V	[M]
C1023	F1H1H102A219	1000P 50V	[M]
C1026	ECA0JAK470XB	47 6.3V	[M]
C1027	F1H1H102A219	1000P 50V	[M]
C1030	ECEA1AKA101B	100 10V	[M]
C1031	ECEA1AKA101B	100 10V	[M]
C1032	F1C1C183A023	0.018 16V	[M]
C1033	F1C1C183A023	0.018 16V	[M]
C1034	ECA1HAK3R3XB	3.3 50V	[M]
C1035	ECA1HAK3R3XB	3.3 50V	[M]
C1036	F1H1C333A071	0.033 16V	[M]
C1037	ECA1HAK3R3XB	3.3 50V	[M]
C1038	F1H1H221A748	220P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C1039	F1H1H221A748	220P 50V	[M]
C1040	ECA1CAK100XB	10 16V	[M]
C1041	ECA1CAK100XB	10 16V	[M]
C1042	ECA1CAK220XB	22 16V	[M]
C1043	ECA1HAK4R7XB	4.7 50V	[M]
C1044	ECA1AAK330XB	33 10V	[M]
C1045	ECA1AAK220XB	22 10V	[M]
C1046	ECA1CAM221XB	220 16V	[M]
C1049	F1H1H332A013	3300P 50V	[M]
C1050	F1H1H332A013	3300P 50V	[M]
C1056	ECA1CAK100XB	10 16V	[M]
C1057	F1H1H102A219	1000P 50V	[M]
C1058	F1H1H102A219	1000P 50V	[M]
C1059	F1H1H103A219	0.01 50V	[M]
C2004	F1H1C104A041	0.1 16V	[M]
C2021	ECA1CAK101XB	100 16V	[M]
C2031	F1H1H103A219	0.01 50V	[M]
C2032	F1H1H103A219	0.01 50V	[M]
C2034	ECJ1VB1C105K	1 16V	[M]
C2035	ECJ1VB1C105K	1 16V	[M]
C2051	F2A1H4R7A014	4.7P 50V	[M]
C2062	F1H1H103A219	0.01 50V	[M]
C2063	ECJ1VC1H101K	100P 50V	[M]
C2064	ECA1CAK100XB	10 16V	[M]
C2067	ECJ1VB1C105K	1 16V	[M]
C2068	ECJ1VB1C105K	1 16V	[M]
C2069	ECJ1VB1C474K	0.47 16V	[M]
C2070	ECJ1VC1H101K	100P 50V	[M]
C2071	F1H1H103A219	0.01 50V	[M]
C2073	F1H1H103A219	0.01 50V	[M]
C2074	ECJ1VC1H470J	47P 50V	[M]
C2102	F1H1C104A041	0.1 16V	[M]
C2103	F1H1H102A219	1000P 50V	[M]
C2104	F1H1C104A041	0.1 16V	[M]
C2105	ECJ1VB1H561K	560P 50V	[M]
C2106	F1H1H332A013	3300P 50V	[M]
C2107	F1H1C104A041	0.1 16V	[M]
C2108	F1H1H102A219	1000P 50V	[M]
C2111	F1H1C104A041	0.1 16V	[M]
C2112	F1H1H102A219	1000P 50V	[M]
C2119	ECJ1VB1C105K	1 16V	[M]
C2120	ECJ1VB1C105K	1 16V	[M]
C2121	ECJ1VB1C224K	0.22 16V	[M]
C2126	ECJ1VB1C224K	0.22 16V	[M]
C2131	ECJ1VB1A474K	0.47 10V	[M]
C2136	ECJ1VB1A474K	0.47 10V	[M]
C2141	ECJ1VB1C105K	1 16V	[M]
C2142	ECJ1VB1C105K	1 16V	[M]
C2151	ECA1CAK100XB	10 16V	[M]
C2166	F1H1H102A219	1000P 50V	[M]
C2194	ECA1HAK010XB	1 50V	[M]
C2195	ECJ1VB1H153K	0.015 50V	[M]
C2197	ERJ3GEY0R00V	0 1/16W	[M]
C2202	F1H1C104A041	0.1 16V	[M]
C2203	F1H1H102A219	1000P 50V	[M]
C2204	F1H1C104A041	0.1 16V	[M]
C2205	ECJ1VB1H561K	560P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C2206	F1H1H332A013	3300P 50V	[M]
C2207	F1H1C104A041	0.1 16V	[M]
C2208	F1H1H102A219	1000P 50V	[M]
C2211	F1H1C104A041	0.1 16V	[M]
C2212	F1H1H102A219	1000P 50V	[M]
C2219	ECJ1VB1C105K	1 16V	[M]
C2220	ECJ1VB1C105K	1 16V	[M]
C2221	ECJ1VB1H473K	0.047 50V	[M]
C2226	ECJ1VB1H473K	0.047 50V	[M]
C2231	ECJ1VB1C393K	0.039 16V	[M]
C2236	ECJ1VB1C393K	0.039 16V	[M]
C2241	ECJ1VB1C105K	1 16V	[M]
C2242	ECJ1VB1C105K	1 16V	[M]
C2245	ECA1CAK100XB	10 16V	[M]
C2251	ECA1CAK100XB	10 16V	[M]
C2266	F1H1H102A219	1000P 50V	[M]
C2294	ECA1HAK010XB	1 50V	[M]
C2295	ECJ1VB1H153K	0.015 50V	[M]
C2297	ERJ3GEY0R00V	0 1/16W	[M]
C2301	ECJ1VC1H100D	10P 50V	[M]
C2302	F1H1H470A230	47P 50V	[M]
C2311	ECJ1VB1A124K	0.12 10V	[M]
C2312	ECJ1VB1A474K	0.47 10V	[M]
C2313	ECJ1VC1H120J	12P 50V	[M]
C2314	F1H1H470A230	47P 50V	[M]
C2315	ECJ1VB1C105K	1 16V	[M]
C2331	ECJ1VB1C105K	1 16V	[M]
C2334	ECJ1VB1C105K	1 16V	[M]
C2335	ECJ1VB1H152K	1500P 50V	[M]GC/GS/GCS/GCT
C2401	ECJ1VC1H100D	10P 50V	[M]
C2402	F1H1H470A230	47P 50V	[M]
C2411	ECJ1VB1A124K	0.12 10V	[M]
C2412	ECJ1VB1A474K	0.47 10V	[M]
C2413	ECJ1VC1H120J	12P 50V	[M]
C2414	F1H1H470A230	47P 50V	[M]
C2415	ECJ1VB1C105K	1 16V	[M]
C2501	ECEA1AKN100B	10 10V	[M]
C2520	F1H1H103A219	0.01 50V	[M]
C2521	F1H1H103A219	0.01 50V	[M]
C2550	F2A1E2210050	220P 25V	[M]
C2551	ECJ1VC1H101K	100P 50V	[M]
C2552	F2A0J102A130	1000P 6.3V	[M]
C2553	ECA0JAK101XB	100 6.3V	[M]
C2554	F1H1H103A219	0.01 50V	[M]
C2555	ECJ1VB1A105K	1 10V	[M]
C2556	F2A1E2210050	220P 25V	[M]
C2561	ECJ1VB1C105K	1 16V	[M]
C2576	ECEA1HKN4R7B	4.7 50V	[M]
C2581	ECA1CAK101XB	100 16V	[M]
C2582	ECA1CAK101XB	100 16V	[M]
C2583	ECJ1VB1C224K	0.22 16V	[M]
C2584	F1H1H221A748	220P 50V	[M]
C2585	F1H1H221A748	220P 50V	[M]
C2586	F1H1H103A219	0.01 50V	[M]
C2587	F1H1H103A219	0.01 50V	[M]
C2588	F1H1C104A041	0.1 16V	[M]
C2601	F1H1H103A219	0.01 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C2602	F2A1C1000018	10P 16V	[M]
C2603	F1H1H103A219	0.01 50V	[M]
C2604	F1H1H102A219	1000P 50V	[M]
C2606	F1H1H103A219	0.01 50V	[M]
C2607	ECJ1VB1E473K	0.047 25V	[M]
C2608	ECJ1VC1H080D	8P 50V	[M]
C2609	F1H1H102A219	1000P 50V	[M]
C2610	F1H1H103A219	0.01 50V	[M]
C2611	F2A1H4R7A014	4.7P 50V	[M]
C2612	F1H1H103A219	0.01 50V	[M]
C2613	F1H1H102A219	1000P 50V	[M]
C2614	F2A1H3R3A013	3.3P 50V	[M]
C2615	F2A1H4R7A014	4.7P 50V	[M]
C2616	F1H1C333A071	0.033 16V	[M]
C2617	F1H1H103A219	0.01 50V	[M]
C2618	F1H1H103A219	0.01 50V	[M]
C2619	F0A2A681A010	680P 100V	[M]
C2620	F2A1C1000018	10P 16V	[M]
C2621	ECA1HAKR47XB	0.47 50V	[M]
C2622	ECA1HAK010XB	1 50V	[M]
C2623	ECA1HAK010XB	1 50V	[M]
C2624	ECJ1VC1H101K	100P 50V	[M]
C2625	ECA1CAK220XB	22 16V	[M]
C2626	ECJ2VF1C105Z	1 16V	[M]
C2627	ECA1CAK220XB	22 16V	[M]
C2629	ECA0JAK101XB	100 6.3V	[M]
C2630	ECA0JAK101XB	100 6.3V	[M]
C2631	ECJ1VC1H151J	150P 50V	[M]
C2632	F1H1H102A219	1000P 50V	[M]
C2633	ECJ1VC1H270J	27P 50V	[M]
C2634	ECJ1VC1H270J	27P 50V	[M]
C2636	F1H1H102A219	1000P 50V	[M]
C2637	F1H1H332A013	3300P 50V	[M]
C2638	F1H1H103A219	0.01 50V	[M]
C2639	F2A1H4R7A014	4.7P 50V	[M]
C2641	ECA1HAK010XB	1 50V	[M]
C2642	ECA1HAK010XB	1 50V	[M]
C2643	ECJ1VB1H682K	6800P 50V	[M]
C2644	ECJ1VB1H682K	6800P 50V	[M]
C2647	F1H1H102A219	1000P 50V	[M]
C2648	F1H1H103A219	0.01 50V	[M]
C2649	F1H1C104A008	0.1 16V	[M]
C2813	ECJ1VC1H101K	100P 50V	[M]
C2814	ECJ1VC1H101K	100P 50V	[M]
C2815	ECJ1VC1H101K	100P 50V	[M]
C2816	ECJ1VC1H101K	100P 50V	[M]
C2817	ECJ1VC1H101K	100P 50V	[M]
C2818	ECJ1VC1H101K	100P 50V	[M]
C2819	ECJ1VC1H101K	100P 50V	[M]
C2820	ECJ1VC1H101K	100P 50V	[M]
C2821	ECJ1VC1H101K	100P 50V	[M]
C2831	F1H1C223A001	0.022 16V	[M]
C2832	F1H1H331A013	330P 50V	[M]
C2833	F1H1H331A013	330P 50V	[M]
C2834	ECJ1VC1H680J	68P 50V	[M]
C2838	ECJ1VC1H680J	68P 50V	[M]
C2840	ECJ1VC1H180J	18P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C2841	ECJ1VC1H180J	18P 50V	[M]
C2851	F1H1C104A041	0.1 16V	[M]
C2852	ECA1CAM471XB	470 16V	[M]
C2853	F1H1C104A041	0.1 16V	[M]
C2854	ECA1CAK101XB	100 16V	[M]
C2856	ECJ1VB1C105K	1 16V	[M]
C2857	F2A1H3R3A013	3.3P 50V	[M]
C2858	F1H1H103A219	0.01 50V	[M]
C2860	ECJ1VC1H101K	100P 50V	[M]
C2861	ECJ1VC1H101K	100P 50V	[M]
C2862	ECJ1VC1H101K	100P 50V	[M]
C2863	ECJ1VC1H101K	100P 50V	[M]
C2864	ECJ1VC1H101K	100P 50V	[M]
C2865	ECJ1VC1H101K	100P 50V	[M]
C2866	ECJ1VC1H101K	100P 50V	[M]
C2867	ECJ1VC1H101K	100P 50V	[M]
C2868	ECJ1VC1H101K	100P 50V	[M]
C2901	ECJ1VC1H101K	100P 50V	[M]
C2902	ECJ1VC1H101K	100P 50V	[M]
C2903	ECJ1VB1H104K	0.1 50V	[M]
C2904	ECJ1VC1H101K	100P 50V	[M]
C2905	F1H1H103A219	0.01 50V	[M]
C2906	ECA1CAK100XB	10 16V	[M]
C2908	ECJ1VC1H101K	100P 50V	[M]
C2909	ECJ1VC1H101K	100P 50V	[M]
C2910	ECJ1VC1H101K	100P 50V	[M]
C2911	ECA1AAK221XB	220 10V	[M]
C2912	F1H1H103A219	0.01 50V	[M]
C2913	ECA1HAK220XB	22 50V	[M]
C2914	F1H1C104A041	0.1 16V	[M]
C2915	F1H1H103A219	0.01 50V	[M]
C2916	ECJ1VC1H101K	100P 50V	[M]
C2917	F1H1H103A219	0.01 50V	[M]
C2918	F1H1H103A219	0.01 50V	[M]
C2919	F2A0J102A130	1000P 6.3V	[M]
C2920	F2A0J102A130	1000P 6.3V	[M]
C2922	F2A0J102A130	1000P 6.3V	[M]
C2923	F2A0J102A130	1000P 6.3V	[M]
C2924	F2A0J102A130	1000P 6.3V	[M]
C2925	F1H1C104A041	0.1 16V	[M]
C2926	ECA1HAK010XB	1 50V	[M]
C2927	ECJ1VB1C105K	1 16V	[M]
C2930	F1H1C104A041	0.1 16V	[M]
C2931	F1H1C104A041	0.1 16V	[M]
C2932	F1H1C104A041	0.1 16V	[M]
C2933	F1H1C104A041	0.1 16V	[M]
C2940	F1H1C104A041	0.1 16V	[M]
C2941	ECA1CAK330XB	33 16V	[M]
C2944	ECJ1VC1H101K	100P 50V	[M]
C2945	ECA1CAK470XB	47 16V	[M]
C2947	ECA0JAK101XB	100 6.3V	[M]
C2948	ECA0JAK221XB	220 6.3V	[M]
C2975	ECJ1VC1H560J	56P 50V	[M]GC/GN/GS
C2976	ECA1CAK100XB	10 16V	[M]
C2977	F2A0J331A015	330P 6.3V	[M]
C2978	F1H1C104A041	0.1 16V	[M]
C2979	ECA1CAK470XB	47 16V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C2980	ECA1CAK470XB	47 16V	[M]
C2981	ECA1CAK101XB	100 16V	[M]
C2982	ECEA1CKA221B	220 16V	[M]
C5101	ECA1VM472E	4700 35V	[M]
C5102	ECA2AM100B	10 100V	[M]
C5103	ECA2AM100B	10 100V	[M]
C5104	ECA1VM472E	4700 35V	[M]
C5105	ECA1AAK221XB	220 10V	[M]
C5106	F1K2A1040006	0.1 100V	[M]
C5107	F1K2A1040006	0.1 100V	[M]
C5109	ECA1EAM101XB	100 25V	[M]
C5110	ECA1EAM101XB	100 25V	[M]
C5111	ECA0JAK101XB	100 6.3V	[M]
C5112	ECA1EAK100XB	10 25V	[M]
C5113	ECA1HM330B	33 50V	[M]
C5119	F2A1V471A141	470P 35V	[M]
C5120	F2A1V471A141	470P 35V	[M]
C5121	ECA1CAK470XB	47 16V	[M]
C5123	F2A1V471A141	470P 35V	[M]
C5124	F2A1V471A141	470P 35V	[M]
C5151	ECJ1VB1H104K	0.1 50V	[M]
C5152	ECJ1VB1H104K	0.1 50V	[M]
C5153	ECJ1VB1H104K	0.1 50V	[M]
C5155	F1H1H102A219	1000P 50V	[M]
C5157	F1H1H103A219	0.01 50V	[M]
C5158	F1H1H103A219	0.01 50V	[M]
C5159	F1H1H103A219	0.01 50V	[M]
C5161	ECJ1VB1H473K	0.047 50V	[M]
C5163	ECJ1VB1H473K	0.047 50V	[M]
C5165	ECA1JM102E	1000 63V	[M]
C5166	ECA1JM102E	1000 63V	[M]
C5167	F1K2A1040006	0.1 100V	[M]
C5168	F1K2A1040006	0.1 100V	[M]
C5171	ECA1JM102E	1000 63V	[M]
C5172	ECA1JM102E	1000 63V	[M]
C5201	F1H1H471A219	470P 50V	[M]
C5202	ECJ1VC1H101K	100P 50V	[M]
C5203	ECJ1VC1H101K	100P 50V	[M]
C5204	ECJ1VC1H101K	100P 50V	[M]
C5205	ECJ1VB1H104K	0.1 50V	[M]
C5207	ECJ1VC1H101K	100P 50V	[M]
C5208	ECA0JAK221XB	220 6.3V	[M]
C5210	F1H1H471A219	470P 50V	[M]
C5211	ECEA0JKS101B	100 6.3V	[M]
C5301	ECJ1VB1A474K	0.47 10V	[M]
C5302	F1H1H331A013	330P 50V	[M]
C5303	ECJ1VB1A474K	0.47 10V	[M]
C5305	F1H1H331A013	330P 50V	[M]
C5308	ECJ1VB1H104K	0.1 50V	[M]
C5309	ECJ1VB1H104K	0.1 50V	[M]
C5310	F1K2A1040006	0.1 100V	[M]
C5311	F1H1H221A748	220P 50V	[M]
C5312	F1K2A1040007	0.1 100V	[M]
C5313	ECJ1VB1H153K	0.015 50V	[M]
C5314	F1K2A1040006	0.1 100V	[M]
C5315	ECJ1VB1H104K	0.1 50V	[M]
C5316	ECJ1VB1H104K	0.1 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C5317	ECJ1VC1H101K	100P 50V	[M]
C5318	F1K2A1040006	0.1 100V	[M]
C5319	ECJ1VB1H153K	0.015 50V	[M]
C5320	F1K2A1040007	0.1 100V	[M]
C5321	F1K2A1040006	0.1 100V	[M]
C5322	ECJ1VB1H104K	0.1 50V	[M]
C5323	ECJ1VB1H104K	0.1 50V	[M]
C5324	ECQV1H684JL3	0.68 50V	[M]
C5325	ECJ1VB1H104K	0.1 50V	[M]
C5327	ECQV1H684JL3	0.68 50V	[M]
C5328	ECJ1VB1H104K	0.1 50V	[M]
C5330	F1H2A221A009	220P 100V	[M]
C5331	F1H2A221A009	220P 100V	[M]
C5332	F1H2A221A009	220P 100V	[M]
C5333	F1H2A221A009	220P 100V	[M]
C5335	ECJ1VB1H153K	0.015 50V	[M]
C5336	F1H1H102A219	1000P 50V	[M]
C5337	F1H1H102A219	1000P 50V	[M]
C5339	ECJ1VB1A474K	0.47 10V	[M]
C5340	ECJ1VB1A474K	0.47 10V	[M]
C5343	ECJ1VB1H153K	0.015 50V	[M]
C5344	F1H1H102A219	1000P 50V	[M]
C5345	F1H1H102A219	1000P 50V	[M]
C5435	ECJ1VB1H153K	0.015 50V	[M]
C5438	ECJ1VB1H153K	0.015 50V	[M]
C5501	ECJ1VB1A474K	0.47 10V	[M]
C5502	F1H1H331A013	330P 50V	[M]
C5503	ECJ1VB1A474K	0.47 10V	[M]
C5508	ECJ1VB1H104K	0.1 50V	[M]
C5509	ECJ1VB1H104K	0.1 50V	[M]
C5510	F1K2A1040006	0.1 100V	[M]
C5511	F1H1H221A748	220P 50V	[M]
C5512	F1K2A1040007	0.1 100V	[M]
C5513	ECJ1VB1H153K	0.015 50V	[M]
C5514	F1K2A1040006	0.1 100V	[M]
C5515	ECJ1VB1H104K	0.1 50V	[M]
C5516	ECJ1VB1H104K	0.1 50V	[M]
C5517	ECJ1VC1H101K	100P 50V	[M]
C5518	F1K2A1040006	0.1 100V	[M]
C5520	F1K2A1040007	0.1 100V	[M]
C5521	F1K2A1040006	0.1 100V	[M]
C5522	ECJ1VB1H104K	0.1 50V	[M]
C5523	ECJ1VB1H104K	0.1 50V	[M]
C5527	ECQV1H684JL3	0.68 50V	[M]
C5528	ECJ1VB1H104K	0.1 50V	[M]
C5530	F1H2A221A009	220P 100V	[M]
C5531	F1H2A221A009	220P 100V	[M]
C5536	ECJ1VB1H153K	0.015 50V	[M]
C5537	ECJ1VB1H153K	0.015 50V	[M]
C5538	F1H1H102A219	1000P 50V	[M]
C5539	F1H1H102A219	1000P 50V	[M]
C5551	ECQE2104KF3	0.1 250V	[M]
C5552	ECQE2104KF3	0.1 250V	[M]
C5709	ECA1CAK101XB	100 16V	[M]
C5710	F1H1H103A219	0.01 50V	[M]
C5711	ECA1CAK100XB	10 16V	[M]
C5712	F1H1H103A219	0.01 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C5713	ECA1CAK100XB	10 16V	[M]
C5950	F2B1E222A005	2200P 25V	[M]
C5951	F1B1H103A007	0.01 50V	[M]
C5952	ECA1AAK470XB	47 10V	[M]
C5953	F1B1H103A007	0.01 50V	[M]
C5954	F1B1H103A007	0.01 50V	[M]
C5955	ECA1HM220B	22 50V	[M]
C5956	ECA1HAM470XB	47 50V	[M]
C5957	ECA1HAK100XB	10 50V	[M]
C5958	F1B1H103A007	0.01 50V	[M]
C5959	F1B1H103A007	0.01 50V	[M]
C5960	ECQE2104KF3	0.1 250V	[M]
C5961	ECA1CAM471XB	470 16V	[M]GS/GCS/GCT
C5962	ECA1CAM471XB	470 16V	[M]GS/GCS/GCT
C5963	ECA1HAK4R7XB	4.7 50V	[M]
C5964	F1B1H103A007	0.01 50V	[M]GS/GCS/GCT
C5965	F1B1H103A007	0.01 50V	[M]
C5966	F2B1E222A005	2200P 25V	[M]
C5971	F2A1E471A205	470P 25V	[M]
C6401	ECJ1VB1H104K	0.1 50V	[M]
C6402	F1H1H103A219	0.01 50V	[M]
C6403	ECJ1VC1H101K	100P 50V	[M]
C6404	ECJ1VC1H101K	100P 50V	[M]
C6405	ECJ1VC1H101K	100P 50V	[M]
C6421	ECJ1VC1H101K	100P 50V	[M]
C6425	ECJ1VC1H101K	100P 50V	[M]
C6481	F2A1A470A388	47P 10V	[M]
C6482	F1H1H102A219	1000P 50V	[M]
C6483	F1H1H103A219	0.01 50V	[M]
C6491	ECJ1VC1H101K	100P 50V	[M]
C6492	ECJ1VC1H101K	100P 50V	[M]
C6551	F1H1H103A219	0.01 50V	[M]
C6552	F1H1H103A219	0.01 50V	[M]
C6553	F1H1H103A219	0.01 50V	[M]
C6554	F1H1H103A219	0.01 50V	[M]
C6555	F1H1H103A219	0.01 50V	[M]
C6556	F1H1H103A219	0.01 50V	[M]
C6601	ECJ1VC1H101K	100P 50V	[M]
C6603	ECJ1VC1H101K	100P 50V	[M]
C6604	ECJ1VC1H101K	100P 50V	[M]
C6623	ECA1HM220B	22 50V	[M]
C6631	ECA1HM220B	22 50V	[M]
C6632	ECA1HM220B	22 50V	[M]
C6635	ECA1HM220B	22 50V	[M]
C6636	ECJ1VC1H101K	100P 50V	[M]
C6901	ECJ1VB1H223K	0.022 50V	[M]GC/GS/GCS/GCT
C6902	ECJ1VB1H223K	0.022 50V	[M]GC/GS/GCS/GCT
C6903	F1H1H103A219	0.01 50V	[M]GC/GS/GCS/GCT
C6904	ECJ1VB1C105K	1 16V	[M]GC/GS/GCS/GCT
C6905	ECA1HAK3R3XB	3.3 50V	[M]GC/GS/GCS/GCT
C6907	F1H1H471A219	470P 50V	[M]GC/GS/GCS/GCT
C6908	ECA1HAK4R7XB	4.7 50V	[M]GC/GS/GCS/GCT
C6909	ECJ1VC1H101K	100P 50V	[M]GC/GS/GCS/GCT
C6910	ECA1HAK0R1XB	0.1 50V	[M]GC/GS/GCS/GCT
C6911	ECJ1VB1C563K	0.056 16V	[M]GC/GS/GCS/GCT
C6912	ECA1HAK010XB	1 50V	[M]GC/GS/GCS/GCT
C6913	F1H1H102A219	1000P 50V	[M]GC/GS/GCS/GCT

[illegible]	[illegible]	[illegible]	[illegible]

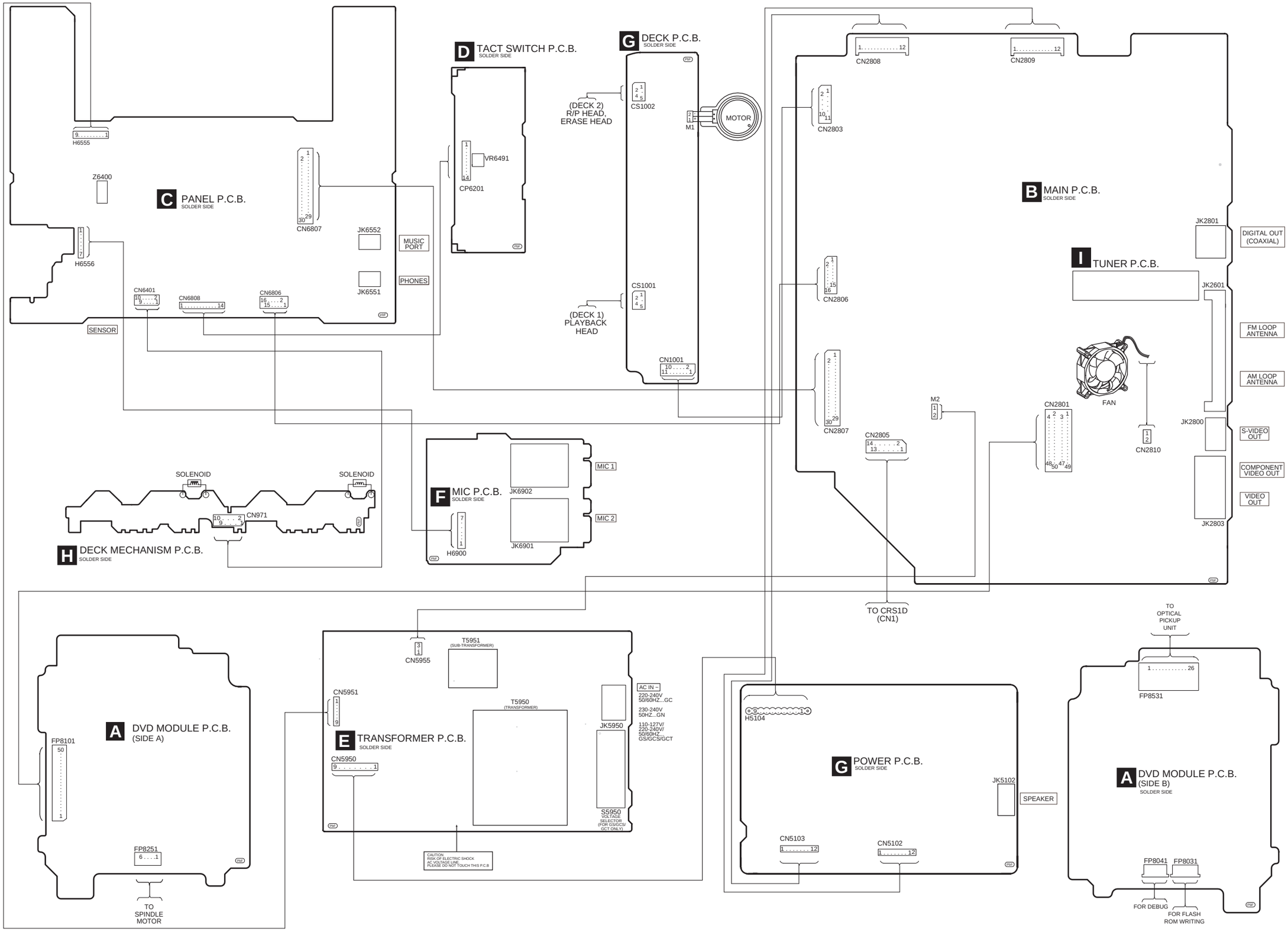
Ref. No.	Part No.	Part Name & Description	Remarks
C6914	ECJ1VC1H101K	100P 50V	[M]GC/GS/GCS/GCT
C6915	ECA1HAKR33XB	0.33 50V	[M]GC/GS/GCS/GCT
C6916	F1H1H102A219	1000P 50V	[M]GC/GS/GCS/GCT
C6917	ECA1CAM471XB	470 16V	[M]GC/GS/GCS/GCT
C6918	ECJ1VB1C683K	0.068 16V	[M]GC/GS/GCS/GCT
C6919	ECJ1VB1H152K	1500P 50V	[M]GC/GS/GCS/GCT
C6920	ECJ1VB1H682K	6800P 50V	[M]GC/GS/GCS/GCT
C6921	F1H1C104A041	0.1 16V	[M]GC/GS/GCS/GCT
C6922	ECJ1VB1C103K	0.01 16V	[M]GC/GS/GCS/GCT
C6923	F1H1H103A219	0.01 50V	[M]GC/GS/GCS/GCT
C6924	ECJ1VB1C683K	0.068 16V	[M]GC/GS/GCS/GCT
C6925	ECJ1VB1C224K	0.22 16V	[M]GC/GS/GCS/GCT
C6926	ECJ1VB1C224K	0.22 16V	[M]GC/GS/GCS/GCT
C6927	F1H1H102A219	1000P 50V	[M]GC/GS/GCS/GCT
C6928	ECJ1VB1H153K	0.015 50V	[M]GC/GS/GCS/GCT
C6929	ECJ1VC1H101K	100P 50V	[M]GC/GS/GCS/GCT
C6930	ECJ1VC1H101K	100P 50V	[M]GC/GS/GCS/GCT
C6931	F2A1A470A388	47P 10V	[M]GC/GS/GCS/GCT
C6932	F2A1A470A388	47P 10V	[M]GC/GS/GCS/GCT
C6933	F1H1A105A025	1 10V	[M]GC/GS/GCS/GCT
C6934	ECA0JAK221XB	220 6.3V	[M]GC/GS/GCS/GCT
C6935	F2A1A470A388	47P 10V	[M]GC/GS/GCS/GCT
C6936	ECA0JAK221XB	220 6.3V	[M]GC/GS/GCS/GCT
C6937	F1H1A105A025	1 10V	[M]GC/GS/GCS/GCT
C8001	F2G0G331A012	330P 4V	[M]
C8003	ECJ0EF1C104Z	0.1 16V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ0EF1C104Z	0.1 16V	[M]
C8006	ECJ0EF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8008	ECJ0EF1C104Z	0.1 16V	[M]
C8011	F2G0J101A066	100P 6.3V	[M]
C8012	ECJ0EF1C104Z	0.1 16V	[M]
C8013	ECJ0EF1C104Z	0.1 16V	[M]
C8014	ECJ0EF1C104Z	0.1 16V	[M]
C8015	ECJ0EF1C104Z	0.1 16V	[M]
C8016	ECJ0EF1C104Z	0.1 16V	[M]
C8017	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8019	ECJ0EF1C104Z	0.1 16V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ0EF1C104Z	0.1 16V	[M]
C8023	ECJ0EF1C104Z	0.1 16V	[M]
C8024	ECJ0EF1C104Z	0.1 16V	[M]
C8025	ECJ0EF1C104Z	0.1 16V	[M]
C8026	ECJ0EF1C104Z	0.1 16V	[M]
C8051	ECJ1VB0J105K	1 6.3V	[M]
C8052	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8052	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8053	ECJ0EF1C104Z	0.1 16V	[M]
C8054	ECJ0EC1H221J	220P 50V	[M]
C8055	ECJ1VB0J105K	1 6.3V	[M]
C8056	ECJ0EB1E222K	2200P 25V	[M]
C8057	ECJ1VB0J105K	1 6.3V	[M]
C8111	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8111	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT

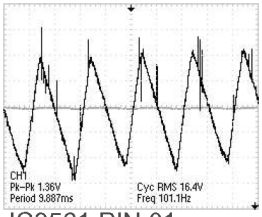
[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C8112	ECJ1VB0J105K	1 6.3V	[M]
C8113	ECJ0EB1E471K	470P 25V	[M]
C8151	ECJ1VB0J475K	4.7 6.3V	[M]
C8152	ECJ1VB1C105K	1 16V	[M]
C8201	F2G0J101A066	100P 6.3V	[M]
C8202	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8202	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8203	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8203	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8211	ECJ0EB1E122K	1200P 25V	[M]
C8221	ECJ0EB1E102K	1000P 25V	[M]
C8222	ECJ0EB1E821K	820P 25V	[M]
C8225	ECJ0EB1E102K	1000P 25V	[M]
C8226	ECJ0EB1E102K	1000P 25V	[M]
C8231	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8231	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8232	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8232	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8251	F2G0J221A065	220P 6.3V	[M]
C8252	ECJ0EF1C104Z	0.1 16V	[M]
C8253	ECJ0EF1C104Z	0.1 16V	[M]
C8255	F2G1C220A037	22P 16V	[M]
C8256	ECJ0EF1C104Z	0.1 16V	[M]
C8257	F2G1C470A076	47P 16V	[M]
C8258	ECJ0EF1C104Z	0.1 16V	[M]
C8261	ECJ0EF1C104Z	0.1 16V	[M]
C8262	ECJ0EF1C104Z	0.1 16V	[M]
C8301	F2G0J221A031	220P 6.3V	[M]
C8302	F2G0J330A031	33P 6.3V	[M]
C8303	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8303	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8304	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8304	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8305	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8305	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8306	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8306	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8311	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8311	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8312	ECJ1VB0J105K	1 6.3V	[M]
C8313	ECJ1VB0J105K	1 6.3V	[M]
C8401	ECJ0EC1H150J	15P 50V	[M]
C8421	F2G0J101A083	100P 6.3V	[M]
C8422	ECJ0EF1C104Z	0.1 16V	[M]
C8423	F2G0J330A083	33P 6.3V	[M]
C8424	ECJ0EF1C104Z	0.1 16V	[M]
C8501	F2G0J101A031	100P 6.3V	[M]
C8502	ECJ0EF1C104Z	0.1 16V	[M]
C8503	ECJ0EF1C104Z	0.1 16V	[M]
C8504	ECJ0EF1C104Z	0.1 16V	[M]
C8505	ECJ0EF1C104Z	0.1 16V	[M]
C8511	ECJ1VB0J105K	1 6.3V	[M]
C8512	ECJ1VB0J105K	1 6.3V	[M]
C8513	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8513	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8514	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8514	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT

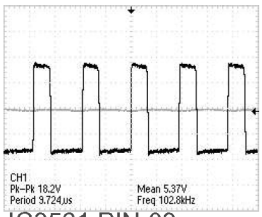
Ref. No.	Part No.	Part Name & Description	Remarks
C8515	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8515	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8516	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8516	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8521	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8521	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8522	F1G1A1040006	0.1 10V	[M]GC/GN/GS
C8522	ECJ0EB1A104K	0.1 10V	[M]GCS/GCT
C8523	ECJ0EF1C104Z	0.1 16V	[M]
C8524	ECJ0EF1C104Z	0.1 16V	[M]
C8525	ECJ0EB1C562K	5600P 16V	[M]
C8526	ECJ0EB1C183K	0.018 16V	[M]
C8527	ECJ0EB1A333K	0.033 10V	[M]
C8528	ECJ1VB0J105K	1 6.3V	[M]
C8529	ECJ1VB0J105K	1 6.3V	[M]
C8530	ECJ0EF1C104Z	0.1 16V	[M]
C8531	ECJ0EC1H101J	100P 50V	[M]
C8532	ECJ0EC1H221J	220P 50V	[M]
C8533	ECJ0EF1C104Z	0.1 16V	[M]
C8541	ECJ0EB1E472K	4700P 25V	[M]
C8550	F2G0J330A031	33P 6.3V	[M]
C8551	ECJ0EF1C104Z	0.1 16V	[M]
C8552	F2G1C100A072	10P 16V	[M]
C8553	F2G0J470A031	47P 6.3V	[M]
C8554	ECJ1VB0J105K	1 6.3V	[M]
C8561	ECJ0EF1C104Z	0.1 16V	[M]
C8562	F2G1C100A072	10P 16V	[M]
C8563	F2G0J470A031	47P 6.3V	[M]
C8564	ECJ1VB0J105K	1 6.3V	[M]
C8571	F1K1A1060017	10 10V	[M]
C8572	ECJ0EF1C104Z	0.1 16V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8602	ECJ0EB1C153K	0.015 16V	[M]
C8606	ECJ0EF1C104Z	0.1 16V	[M]
C8611	ECJ0EF1C104Z	0.1 16V	[M]
C8621	ECJ0EC1H120J	12P 50V	[M]
C8622	ECJ0EC1H120J	12P 50V	[M]
C8651	ECJ0EF1C104Z	0.1 16V	[M]
C8652	ECJ0EF1C104Z	0.1 16V	[M]
C8691	ECJ0EF1C104Z	0.1 16V	[M]
C8695	ECJ0EF1C104Z	0.1 16V	[M]

PRT0604 S/D/J/N/P

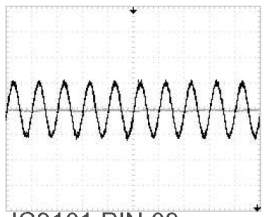

C PANEL P.C.B.
SOLDER SIDE
H6555
Z6400
H6556
CN6807
JK6552
MUSIC PORT
JK6551
PHONES
CN6401
CN6808
CN6806
SENSOR
D TACT SWITCH P.C.B.
SOLDER SIDE
VR6491
CP6201
G DECK P.C.B.
SOLDER SIDE
(DECK 2) R/P HEAD, ERASE HEAD
CS1002
MOTOR
M1
CS1001
(DECK 1) PLAYBACK HEAD
CN1001
B MAIN P.C.B.
SOLDER SIDE
CN2808
CN2809
CN2803
CN2806
CN2807
CN2805
M2
CN2801
FAN
CN2810
JK2801
DIGITAL OUT (COAXIAL)
I TUNER P.C.B.
JK2601
FM LOOP ANTENNA
AM LOOP ANTENNA
JK2800
S-VIDEO OUT
COMPONENT VIDEO OUT
VIDEO OUT
JK2803
SOLENOID
SOLENOID
CN971
H DECK MECHANISM P.C.B.
SOLDER SIDE
F MIC P.C.B.
SOLDER SIDE
JK6902
JK6901
H6900
MIC 1
MIC 2
TO CRS1D (CN1)
A DVD MODULE P.C.B.
(SIDE A)
FP8101
FP8251
TO SPINDLE MOTOR
CN5955
T5951
(SUB-TRANSFORMER)
CN5951
T5950
(TRANSFORMER)
E TRANSFORMER P.C.B.
SOLDER SIDE
CN5950
JK5950
S5950
VOLTAGE SELECTOR
(FOR GS/GCS/GCT ONLY)
AC IN ~
220-240V 50/60HZ...GC
230-240V 50HZ...GN
110-127V/ 220-240V/ 50/60HZ... GS/GCS/GCT
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B
H5104
G POWER P.C.B.
SOLDER SIDE
CN5103
CN5102
JK5102
SPEAKER
TO OPTICAL PICKUP UNIT
FP8531
A DVD MODULE P.C.B.
(SIDE B)
SOLDER SIDE
FP8041
FP8031
FOR DEBUG
FOR FLASH ROM WRITING



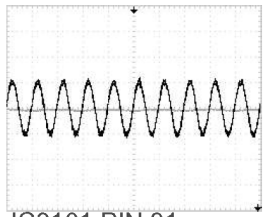
IC2561 PIN 01
CD PLAY
1.36Vp-p (5msec.div)



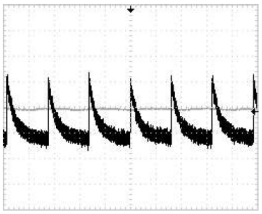
IC2561 PIN 02
CD PLAY
18.2Vp-p (5usec.div)



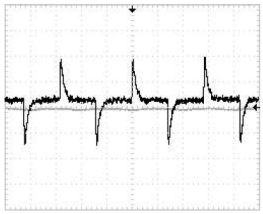
IC2101 PIN 03
CD PLAY
236mVp-p (1msec.div)



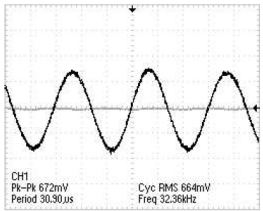
IC2101 PIN 31
CD PLAY
236mVp-p (1msec.div)



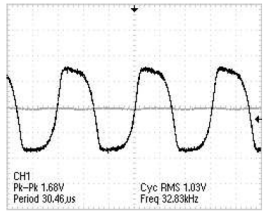
IC2801 PIN 01
CD PLAY
304mVp-p (1msec.div)



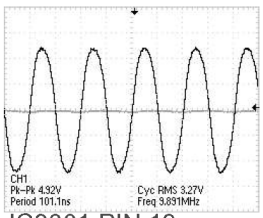
IC2801 PIN 06
CD PLAY
344mVp-p (250nsec.div)



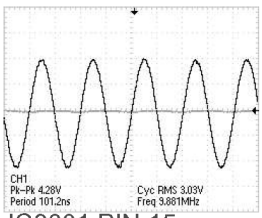
IC2801 PIN 10
CD PLAY
672mVp-p (10usec.div)



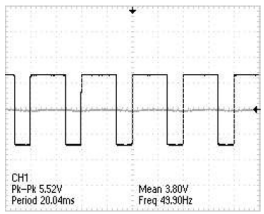
IC2801 PIN 11
CD PLAY
1.68Vp-p (10usec.div)



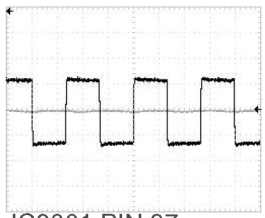
IC2801 PIN 13
CD PLAY
4.92Vp-p (50nsec.div)



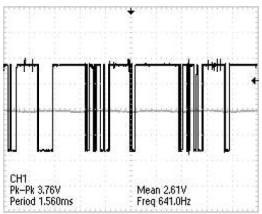
IC2801 PIN 15
CD PLAY
4.28Vp-p (50nsec.div)



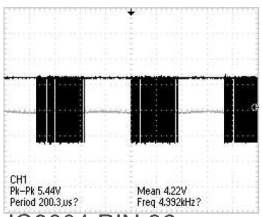
IC2801 PIN 20
CD PLAY
5.52Vp-p (10msec.div)



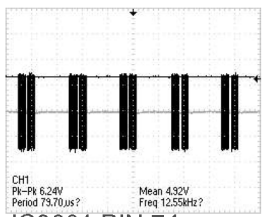
IC2801 PIN 37
CD PLAY
5.44Vp-p (10usec.div)



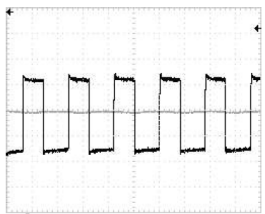
IC2801 PIN 35
CD PLAY
3.76Vp-p (10msec.div)



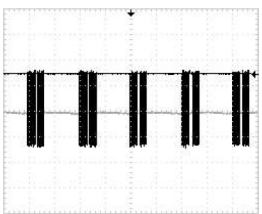
IC2801 PIN 36
CD PLAY
5.44Vp-p (10msec.div)



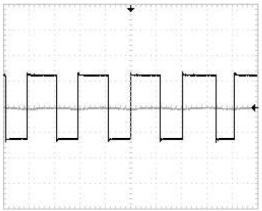
IC2801 PIN 74
CD PLAY
6.24Vp-p (10msec.div)



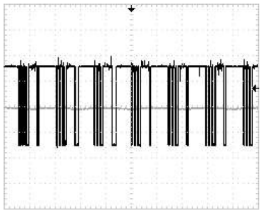
IC2801 PIN 73
CD PLAY
3.20Vp-p (5usec.div)



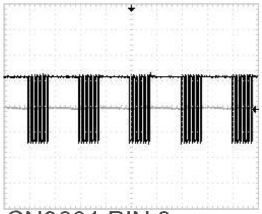
IC2801 PIN 72
CD PLAY
6.08Vp-p (10msec.div)



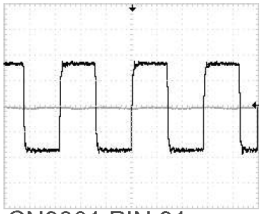
CN2801 PIN 1
CD PLAY
5.52Vp-p (250usec.div)



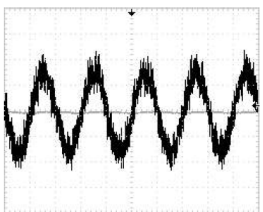
CN2801 PIN 2
CD PLAY
3.56Vp-p (25msec.div)



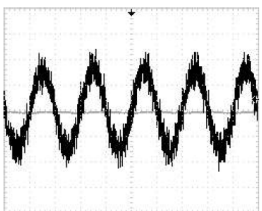
CN2801 PIN 3
CD PLAY
5.56Vp-p (250usec.div)



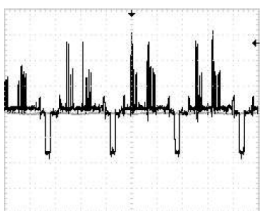
CN2801 PIN 21
CD PLAY
3.64Vp-p (250nsec.div)



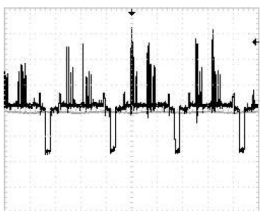
CN2801 PIN 37
CD PLAY
936mVp-p (500usec.div)



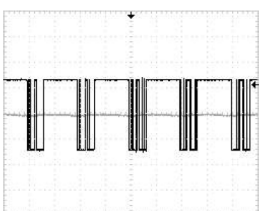
CN2801 PIN 39
CD PLAY
952mVp-p (500usec.div)



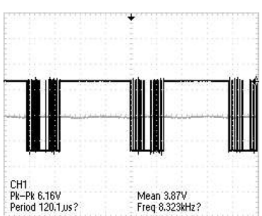
CN2801 PIN 43
CD PLAY
1.00Vp-p (25usec.div)



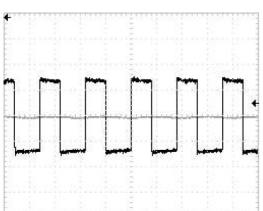
CN2801 PIN 49
CD PLAY
992mVp-p (25usec.div)



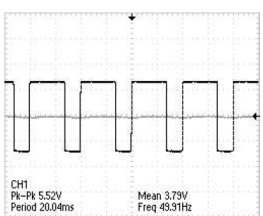
CN2807 PIN 15
CD PLAY
5.84Vp-p (10msec.div)



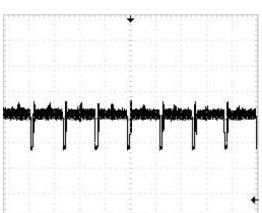
CN2807 PIN 16
CD PLAY
6.16Vp-p (5msec.div)



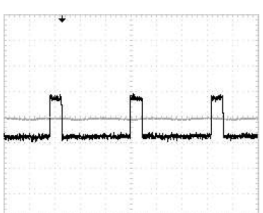
CN2807 PIN 17
CD PLAY
6.16Vp-p (5usec.div)



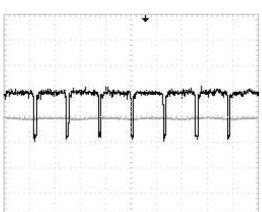
CN2807 PIN 28
CD PLAY
5.52Vp-p (10msec.div)



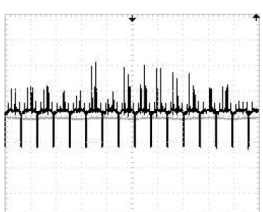
IC2701 PIN 13
CD PLAY
1.8Vp-p (50usec.div)



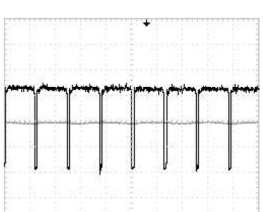
IC2701 PIN 14
CD PLAY
376mVp-p (10usec.div)



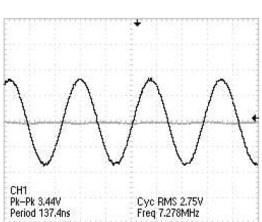
IC2701 PIN 15
CD PLAY
900mVp-p (5usec.div)



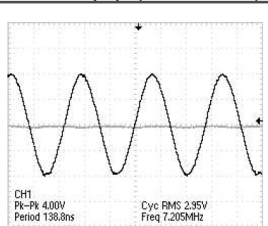
IC2701 PIN 16
CD PLAY
980mVp-p (100usec.div)



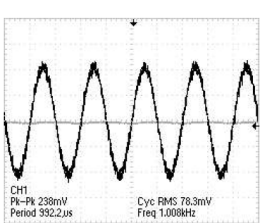
IC2701 PIN 17
CD PLAY
1.82Vp-p (10msec.div)



IC2602 PIN 18
CD PLAY
3.44Vp-p (50nsec.div)



IC2602 PIN 20
CD PLAY
4.00Vp-p (50nsec.div)



IC2103 PIN 01
CD PLAY
238mVp-p (500usec.div)

DECK P.C.B

Ref No.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0.6	5.5	5.5	2.8	0	0.3	0	1.9	7.2	0	11.3	0	0	0	0.3	0	0.2	5.4
STANDBY	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.1

Ref No.	IC1001																			
MODE	21	22	23	24																
CD PLAY	6.3	0.7	0	0																
STANDBY	0.3	0.3	0	0																

Ref No.	IC1004																			
MODE	1	2	3	4	5															
CD PLAY	7.9	0	0	0	0															
STANDBY	0	0	0	0	0															

Ref No.	Q1003				Q1004				Q1005				Q1007				Q1017			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	14.7	0		0	14.7	0		0	0	0		0	11.3	-1.8	
STANDBY	0	0	0		0	0	0		0	0	0		0	0	0		0	-0.1	-2.9	

DECK MECHANISM P.C.B

Ref No.	IC951																			
MODE	1	2	3	4																
CD PLAY	4.9	5	3.9	5																
STANDBY	0	0	0	0																

Ref No.	IC971																			
MODE	1	2	3	4																
CD PLAY	2.2	5	3.9	5.1																
STANDBY	0	0	0	0																

MIC P.C.B

Ref No.	Q6901				Q6902				Q6903											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	2.3	3.7	2.9		0.2	2.9	0.8		5.9	7.7	6.4									
STANDBY	0	0.2	0.2		0	0.2	0.2		0	0.2	0.2									

TUNER P.C.B

Ref No.	Q1				Q2				Q3				Q4							
MODE	G	D	S		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0	0		0	0	0		0	0	0		0	0	0					
STANDBY	0	0	0		0	0	0		0	0	0		0	0	0					

PANEL P.C.B

Ref No.	IC6601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	2.3	1.6	1.2	4.1	4.8	3.9	0	0	5	-16.5	-29.5	-24.5	-27.5	-27	-24.4	-19.2
STANDBY	0.2	0.1	0.1	0.1	0	0.1	0	0	0	0	0	0	0.2	-29.1	-28.9	-28.8	-28.7	-28.7	-28.6	-28.6

Ref No.	IC6601																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-21.9	-13.9	-16.5	-29.7	-27.1	-29.7	-21.9	-27.1	-27.1	-30.3	-30	-27.4	-27.4	-27.4	-27.4	-27.4	-27.4	-27.4	-27.4	-27.4
STANDBY	-28.6	-28.5	-28.5	-28.4	-28.4	-28.3	-28.3	-28.2	-28.2	-28.2	-27.8	-27.7	-27.6	-27.7	-27.6	-27.6	-27.5	-27.4	-27.4	-27.3

Ref No.	IC6601																			
MODE	41	42	43	44																
CD PLAY	-27.4	-27.4	5	0																
STANDBY	-27.3	-27.3	0.2	0																

Ref No.	IC6930																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-8.8	3.6	3.6	8.3	8.9												
STANDBY	0	0	0	0	1.8	1.8	-0.3	-0.3												

Ref No.	IC6931																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	2.6	2.6	2.6	2.6	0.6	0.6	0	2.6	0	2.6	2.6	2.6	0.9	5.2	0				
STANDBY	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0.2	0.2	0				

Ref No.	Q6411				Q6415				Q6421				Q6425				Q6701			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	12.1	0	12		12	0	12		0	12.1	0		0	12	0		0	0.2	0	
STANDBY	0.3	0	0.3		0.3	0	0.3		0	0.3	0		0	0.3	0		0	0.2	0	

Ref No.	Q6703				Q6803				Q6804				Q6805				Q6904			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0.2	5		5.1	5.1	4.3		5.1	5	4.3		0	0	5		0	0	0.8	
STANDBY	0	0.2	0		5.2	5.2	4.4		5.1	0	4.9		0	4.9	0		0	0	-1.2	

Ref No.	Q6905				Q6906				Q6907				Q6908				Q6909			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.8		0	0	0		0	0	5.1		0	0	3.7		0	0	0	
STANDBY	0	0	-1.5		0	0	0		0	0	0		0	0	0		0	0	0	

Ref No.	Q6910				Q6911															
MODE	E	C	B		E	C	B													
CD PLAY	4.8	4.8	0		4.8	4.7	0													
STANDBY	0	-1.3	0		0	0	0													

POWER P.C.B

Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	4.8	2.3	2.4	2.2	2.3	0	0.7	2	2.4	2.5	0.3	1.8	4.9						
STANDBY	0	0.1	0	0.1	0	0	0	0.1	0.1	0	0	0	0	0.2						
Ref No.	IC5301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.4	0	0	28.5	0	-28.7	-20.7	28.9	11.4	-0.1	-29	-16.2	-29.1	-0.2	11..3	29	-28.8	-28.8	0	28.6
STANDBY	0	0	0	0	0	-0.2	0	0	0	0	-0.2	0	0-.2	0	0	0	-0.2	-0.2	0	0
Ref No.	IC5301																			
MODE	21	22	23																	
CD PLAY	0	0	4.4																	
STANDBY	0	0	0.1																	
Ref No.	IC5501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.4	0	0	28.7	0	-28.7	-20.9	29	11.2	-0.2	-29	-16.3	-16.3	0	0	29	-28.8	-28.8	0	28.8
STANDBY	0	0	0	0	0	-0.2	0	0	0	0	-0.2	0	0	0	0	0	0	-0.2	0	0
Ref No.	IC5501																			
MODE	21	22	23																	
CD PLAY	0	0	4.4																	
STANDBY	0	0	0.1																	
Ref No.	Q5101				Q5102				Q5103				Q5104				Q5108			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	29.1	-41.5	32.6		-42	-29.1	-38.5		0	5	0		0.1	5.1	0		-41.9	-38.5	-41.4	
STANDBY	0.2	0.2	11.4		-2.3	-0.3	0		0	0.6	0.1		0.1	0.6	0		-2.3	0	-2.3	
Ref No.	Q5109				Q5110				Q5111				Q5112				Q5113			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-4.5	-16.9	-5.1		28.5	32.6	29		15	27.2	15.7		15.6	12	15		16	15.1	15.7	
STANDBY	0	-2.3	0		0.1	11.7	0.2		0	0.1	0.1		0.4	0.3	0.4		0.4	0	0.4	
Ref No.	Q5114				Q5115				Q5150				Q5151				Q5152			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	11.3	15.1	11.9		5.1	5.8	8.4		4.4	0	5		4.4	0	5.1		0	4.2	0	
STANDBY	0	0.4	0.4		0.2	0	0		0.1	0	0		0.1	0	0		0	0	0.7	
Ref No.	Q5201				Q5202				Q5707				Q5708				Q5709			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	2.5	0.5	4.8		2.5	2.4	2.2		9..1	11.5	9.7		0	-9.4	-0.6		-8.9	-23.9	-9.4	
STANDBY	0	0	0		0	0	0		0.2	0	0		0.2	-0.2	0.4		0.2	-0.2	-0.2	

TRANSFORMER P.C.B

Ref No.	Q5950				Q5951				Q5952				Q5953				Q5954			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.9	10.7	6.5		-30.7	-47.5	-31.2		0	2.9	-1		0	0.1	0.8		10.9	26.5	10.1	
STANDBY	5.9	11.6	6.5		-27.8	-27.8	-27.6		0	2.9	-1.1		0	5.9	0		11.6	27.2	10.8	

POWER P.C.B

Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	4.8	2.3	2.4	2.2	2.3	0	0.7	2	2.4	2.5	0.3	1.8	4.9						
STANDBY	0	0.1	0	0.1	0	0	0	0.1	0.1	0	0	0	0	0.2						
Ref No.	IC5301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.4	0	0	28.5	0	-28.7	-20.7	28.9	11.4	-0.1	-29	-16.2	-29.1	-0.2	11..3	29	-28.8	-28.8	0	28.6
STANDBY	0	0	0	0	0	-0.2	0	0	0	0	-0.2	0	0-.2	0	0	0	-0.2	-0.2	0	0
Ref No.	IC5301																			
MODE	21	22	23																	
CD PLAY	0	0	4.4																	
STANDBY	0	0	0.1																	
Ref No.	IC5501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.4	0	0	28.7	0	-28.7	-20.9	29	11.2	-0.2	-29	-16.3	-16.3	0	0	29	-28.8	-28.8	0	28.8
STANDBY	0	0	0	0	0	-0.2	0	0	0	0	-0.2	0	0	0	0	0	0	-0.2	0	0
Ref No.	IC5501																			
MODE	21	22	23																	
CD PLAY	0	0	4.4																	
STANDBY	0	0	0.1																	
Ref No.	Q5101				Q5102				Q5103				Q5104				Q5108			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	29.1	-41.5	32.6		-42	-29.1	-38.5		0	5	0		0.1	5.1	0		-41.9	-38.5	-41.4	
STANDBY	0.2	0.2	11.4		-2.3	-0.3	0		0	0.6	0.1		0.1	0.6	0		-2.3	0	-2.3	
Ref No.	Q5109				Q5110				Q5111				Q5112				Q5113			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-4.5	-16.9	-5.1		28.5	32.6	29		15	27.2	15.7		15.6	12	15		16	15.1	15.7	
STANDBY	0	-2.3	0		0.1	11.7	0.2		0	0.1	0.1		0.4	0.3	0.4		0.4	0	0.4	
Ref No.	Q5114				Q5115				Q5150				Q5151				Q5152			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	11.3	15.1	11.9		5.1	5.8	8.4		4.4	0	5		4.4	0	5.1		0	4.2	0	
STANDBY	0	0.4	0.4		0.2	0	0		0.1	0	0		0.1	0	0		0	0	0.7	
Ref No.	Q5201				Q5202				Q5707				Q5708				Q5709			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	2.5	0.5	4.8		2.5	2.4	2.2		9..1	11.5	9.7		0	-9.4	-0.6		-8.9	-23.9	-9.4	
STANDBY	0	0	0		0	0	0		0.2	0	0		0.2	-0.2	0.4		0.2	-0.2	-0.2	

TRANSFORMER P.C.B

Ref No.	Q5950				Q5951				Q5952				Q5953							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	5.9	10.7	6.5		-30.7	-47.5	-31.2		0	2.9	-1		0	0.1	0.8					
STANDBY	5.9	11.6	6.5		-27.8	-27.8	-27.6		0	2.9	-1.1		0	5.9	0					

MIC P.C.B

Ref No.	Q6901				Q6902				Q6903											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	2.3	3.7	2.9		0.2	2.9	0.8		5.9	7.7	6.4									
STANDBY	0	0.2	0.2		0	0.2	0.2		0	0.2	0.2									

Ref No.	Q2052																			
MODE	1	2	3	4	5	6														
CD PLAY	0	-6	0	0	-6	0														
STANDBY	0	0.3	0	0	0.3	0														

Ref No.	Q2502																			
MODE	1	2	3	4	5	6														
CD PLAY	0	-6	0	0	-6	0														
STANDBY	0	0.7	0	0	0.7	0														

Ref No.	Q2366																			
MODE	1	2	3	4	5	6														
CD PLAY	0	-6	0	0	-6	0														
STANDBY	0	0.7	0	0	0.7	0														

Ref No.	Q2051				Q2142				Q2143				Q2242				Q2243			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.2	-6	4.6		0	0	0		0	0	-6		0	0	0		0	0	-6	
STANDBY	0	-0.5	0		0	0	0		0	0	0.6		0	0	0		0	0	0.6	

Ref No.	Q2501				Q2551				Q2552				Q2576				Q2601			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	-6	0		15.8	-3.9	15.7		4.5	5.2	5.2		0	5.1	-3.9		0	0	0	
STANDBY	1.3	0.9	0		16.8	0.3	16.8		0	0	0		0	0.3	-0.8		0	0	0	

Ref No.	Q2606				Q2806				Q2901				Q2912				Q2913			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	14.9	0	14.9		0	0	0		0	0	4.6		0	0	4.3		0	12	0	
STANDBY	0	0	0		0	5.2	0		0	0	0		0	0	0		0	0.2	0	

Ref No.	Q2914				Q2948				Q2949				Q2978				Q2979			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	12.1	0	12.1		0	0	0.2		0	5.1	0		5.1	0	5.1		5.1	-2.1	5.1	
STANDBY	0.3	0	0.3		0	0	0		0	0.7	0		0.1	0	0.1		0.1	-3.1	0.1	

Ref No.	Q2942				Q2980				Q2061				Q2062				Q2063			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	12	0	12		1.9	5.2	2.6		0	0	0		0	0	0		0	-0.1	0	
STANDBY	0.3	0	0.3		0	0	0		0	0	-0.8		0	0	-0.6		0	-0.6	0	

Ref No.	Q2064				Q2065				Q2943											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	-0.5	0		0	0	-6		0	12.1	0.1									
STANDBY	0	-0.4	0		0	0	0.6		0	0.5	0									

MAIN P.C.B

Ref No.	IC2061																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-8.9	0	0	0	9												
STANDBY	0	0	0	0.3	0	0	0	0.2												
Ref No.	IC2101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.5	4.6	4.5	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0	5.4	0	9	0.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.2	0
Ref No.	IC2101																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5								
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0								
Ref No.	IC2103																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-3.8	0	0	0	3.8												
STANDBY	0	0	0	0.3	0	0	0	0.2												
Ref No.	IC2561																			
MODE	1	2	3	4	5															
CD PLAY	15.8	5.3	0	1	4															
STANDBY	16.8	0	0	0	0															
Ref No.	IC2601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2	5.9	2	2	0	5	5.2	3.8	0	4.8	3.5	3.5	1.6	1.5	1.9	2	2	2.2	0	0.1
STANDBY	0	0	0	0	0	0.2	0.2	0	0.2	0.1	0.2	0.2	0	0	0	0	0	0.1	0	0
Ref No.	IC2601																			
MODE	21	22	23	24																
CD PLAY	2.4	2.4	5.9	4.5																
STANDBY	0	0	0.2	0.2																
Ref No.	IC2602																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.6	0	0	0	5.2	4.8	1.1	4.5	0	15.4	0	0	2.6	0	5.2	0	0	15.4	0	2.6
STANDBY	0	0	0	0	0.2	0.2	0.3	0.2	0.2	0	0.1	0.2	0	0	0.2	-0.2	-0.2	0	0	0
Ref No.	IC2701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	5.2	2.5	2.6	1.8	5.2	1.8	0	2.4	0	0	2.4	2.4	1.7	1.7	1.6	2.4				
STANDBY	0	0	0	0	0	0	0	0	0.2	0	0.5	0.5	0.5	0.5	0.5	0				
Ref No.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.3	0	0	5.4	5.4	0	0	0	0	0.6	0.7	5.4	2.7	0	2.6	5.5	5.4	5.4	0	3.7
STANDBY	0	0	0	0	0	0	0	0	0	0.7	0.7	5.4	2.7	0	2.6	5.4	5.4	5.4	0	3.6
Ref No.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	5.1	5	0	0	0.2	0	5.4	0	0	0	0	0	0	1.3	2.7	4.2	4.5	0	5.4	0
STANDBY	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Ref No.	IC2801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	5.3	5.4	5.4	0	0	5.3	5.3	0	0	0	0	0	5.4	5.4	5.4
STANDBY	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0
Ref No.	IC2801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	5.4	0	0	0	0	5.4	5.4	0	0	0	4	4.1	4.9	0	0	0	5.3	0	0
STANDBY	0	5.1	0	0	0	0	5.4	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2801																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0.1	0	0	0	0.1	5.3	0	2.7	0	4.9	4.6	3.2	2.3	0.6	0	0.6	5.4	5.4	0
STANDBY	0	0	0	0	0	0	0	0	2.7	0	0	0	3.2	2.3	0	0	0	5.4	5.4	0
Ref No.	IC2804																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-8.9	0	0	0	9												
STANDBY	0	0	0	0.3	0	0	0	0.2												

Ref No.	IC8420															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CD PLAY	0	3.4	3	3.4	1.7	1	1.8	1.8	0	0	5.1	0	2.6	2.5	2.5	5.1
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ref No.	IC8601			
MODE	1	2	3	4
CD PLAY	3.4	1.3	0.1	0
STANDBY	0	0	0	0

Ref No.	IC8606				
MODE	1	2	3	4	5
CD PLAY	3.4	3.4	0.1	0.1	0
STANDBY	0	0	0	0	0

Ref No.	IC8691				
MODE	1	2	3	4	5
CD PLAY	3.1	3.1	0.1	4.5	5
STANDBY	0	0	0	0	0

Ref No.	IC8695				
MODE	1	2	3	4	5
CD PLAY	2.8	2.8	0.1	4.2	5
STANDBY	0	0	0	0	0

Ref No.	Q8551				Q8561				QR8571		
MODE	E	C	B		E	C	B		E	C	B
CD PLAY	0.1	5.1	0.2		1.4	3.9	2		3.4	3.3	0.2
STANDBY	0	0	0		0	0	0		0	0	0

DVD P.C.B

Ref No.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.2	0.2	3.4	0.1	0.1	0.1	0.1	3.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3.4	2.6	2.6	2.6
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.2	1.3	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.2	3.4	1.2	1.2	1.2	1.2	1.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	0.2	3.4	0.2	1.3	1.2	0.2	0.2	3.4	3.4	2.5	0.2	3.5	1.5	3.5	1.1	2.2	1.2	1.5	2.3
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.5	2.3	1.8	2.6	0.2	3.5	3.5	0.2	0	0.2	0.2	0.2	2.7	2.7	3.1	3.1	3.4	3	0.2	0.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.2	0.2	1.3	3.4	0.2	0.2	3.5	3.5	3.5	2.1	1.7	0.2	3.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0.2	3.4	1	0.2	2.5	1.9	0.1	0.2	1.9	3.4	0.2	0.2	2	2	1.8	1.8	1.8	1.8	3.4	2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.2	0.2	0.6	0.2	0.2	2	2.4	1.8	2.7	2.7	2.7	2.7	2.7	2.7	2.5	2.6	2.6	2.6	2	2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	1.8	1.8	0.2	1.8	1.8	3.5	0.9	1	0.5	3.4	1.9	1.1	1.1	1.9	0.1	0.5	1	3.5	0.1	3.5
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	0.1	1.7	1.8	0.2	1.4	1.7	1.8	1.8	1	0.2	0.2	1	1.8	0.2	3.5	0.2	0.2	0.2	0.2	0.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	0.2	0.2	0.2	3.5	0.2	0.2	3.5	3.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.5	3.1	3.1	3
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
CD PLAY	3.3	3	3.2	3.5	0.2	3.3	3.2	3	3.3	3.1	3	3.2	3	3.4	0.1	3	2.9	1.3	2.7	2.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
CD PLAY	3.3	0.1	1.7	3.4	1.7	0.1	3.3	3.3	3.2	0.1	2	0.1	0.1	1.3	1.8	0.1	0.1	0.1	3.4	1.6
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8001																			
MODE	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256				
CD PLAY	0.1	1.7	0.3	1.7	0.3	1.6	1.6	0.1	3.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Ref No.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.8	1.7	1.7	2.4	2.4	2	0.1	5	3.4	0	2.6	2.6	2.6	2.6	5.4	5.5	6.2	4.6	0.1	3.4
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC8251																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	11.1	10.9	1.9	1.7	1.7	1.7	3.4	5												
STANDBY	0	0	0	0	0	0	0	0												

SCHEMATIC DIAGRAM - 18

H DECK CIRCUIT

: +B SIGNAL
: RECORD SIGNAL LINE
: PLAYBACK SIGNAL

TO B
MAIN CIRCUIT (CN2803) ON
SCHEMATIC DIAGRAM-10

CN1001
PRL PBR AFGND RECINL RECINR +B REC_H MO+B MO GND DECK1_H MOTOR

PLACKBACK HEAD
RECORD/PLAY HEAD
ERASE HEAD
CS1001
CS1002

IC1001
AN7348S-E1
P.B EQ/REC AMP/
ALC/TPS AMP
TAPE A INPUT, TAPE A INPUT, PB AMP NF, PB AMP EQ, PB AMP OUTPUT, ALC LOW CUT, REC IN, REC OUT, ALC T, HI/LO, CRO/NOR, VCC
TAPE B INPUT, TAPE B INPUT, PB AMP NF, PB AMP EQ, PB AMP OUTPUT, AB SW T, REC IN, REC OUT, REC/PB SW, AB SW, RIPPLE FILTER, OUTPUT GND

IC1004
C1AA00000612
R/P SELECT
VCC SW GND CTRL2 CTRL1

Q1003
B1AAGC000007
SWITCHING
(RECH)

Q1004, Q1005
B1AAGC000007
BIAS OSCILLATOR

Q1004
Q1005

Q1007
B1ABCF000176
BIAS OSC CONTROL

L1002 G2ZZ000000024
L1001 G0C470JA0052
D1003 B0ACCK000005

Q1017
B1AARC000003
MOTOR SWITCH
M1
(REF NO 53)

TP 10, TP 5, TP 4, TP 3, TP 11, TP 12

I DECK MECHANISM CIRCUIT

IC971
CNB13030R2AU
PHOTO INTERRUPTER
HALF RECINH_R MODE RECINH_F
S972 S974 S971 S975
R972 820
R973 39K
D971 MA2C16500E
PL970
MODE D1_CRO2 PL GND PHOTO_T HALF STBY_5V VREF_GND PHOTO_S

Z971
RGSD12A14445T
VREF_GND HALF RECINH_R MODE RECINH_F AD_OUT STBY_5V

IC951
CNB13030R2AU
PHOTO INTERRUPTER
R952 820
R953 39K
D951 MA2C16500E
PL971
S952 HALF
S951 MODE

PL2 PL1 STBY_5V PL_GND AD_OUT PHOTO_PB PHOTO_RP HALF_PB VREF_GND MODE_PB
CN971

TO C
PANEL
CIRCUIT
(CN6401) ON
SCHEMATIC
DIAGRAM-12

SA-VK650GC/GCS/GN/GS/GCT DECK MECHANISM CIRCUIT/DECK CIRCUIT

SCHEMATIC DIAGRAM - 17

G POWER CIRCUIT

—— : +B SIGNAL LINE – – : -B SIGNAL LINE ⇨ : MAIN SIGNAL LINE

L5402
G0B9R5K00001

L5302
G0B9R5K00001

L5401
G0B9R5K00001

SUBWOOFER
SUBWOOFER
R_GND
R_CHANNEL
L_GND
L_CHANNEL
SUBWOOFER
SPEAKER
JK5102

C5536 0.015
C5537 0.015
C5335 0.015
C5438 0.015
C5435 0.015
C5343 0.015

R5525 5.6K
R5318 5.6K
R5418 5.6K
R5317 10K

Q5103,Q5104
B1ABCF000176
FAN ON/OFF SWITCH
Q5104
Q5103

R5413 100K
R5313 150K
R5513 330K
C5105 10V220
R5111 100K
C5155 1000P
D5126
B0ACEL000004
R5150 220K

Q5101
D5101 B0BA01100004
C5102 100V10
D5121 B0EAKM000122
D5122 B0EAKM000122
C5103 100V10
R5103 10K
Q5110
B1AACF000064
26V REGULATOR
R5101 10K
R5114 2.7
D5102 B0BA02600018

C5551 0.1
C5101 35V4700
C5161 0.047
C5151 0.1

C5107 0.1
C5171 63V1000
C5167 0.1
C5166 35V1000
C5106 0.1
C5172 63V1000
C5168 0.1
C5165 35V1000

+VCC1
+VCC1
-VCC1
-VCC1
AC GND
AC GND
ACIN
SUB+B
DGND
H5104

TO E TRANSFORMER CIRCUIT (CN5950) ON SCHEMATIC DIAGRAM 13/14

W5502 0
W5500 0
E5100
E5102

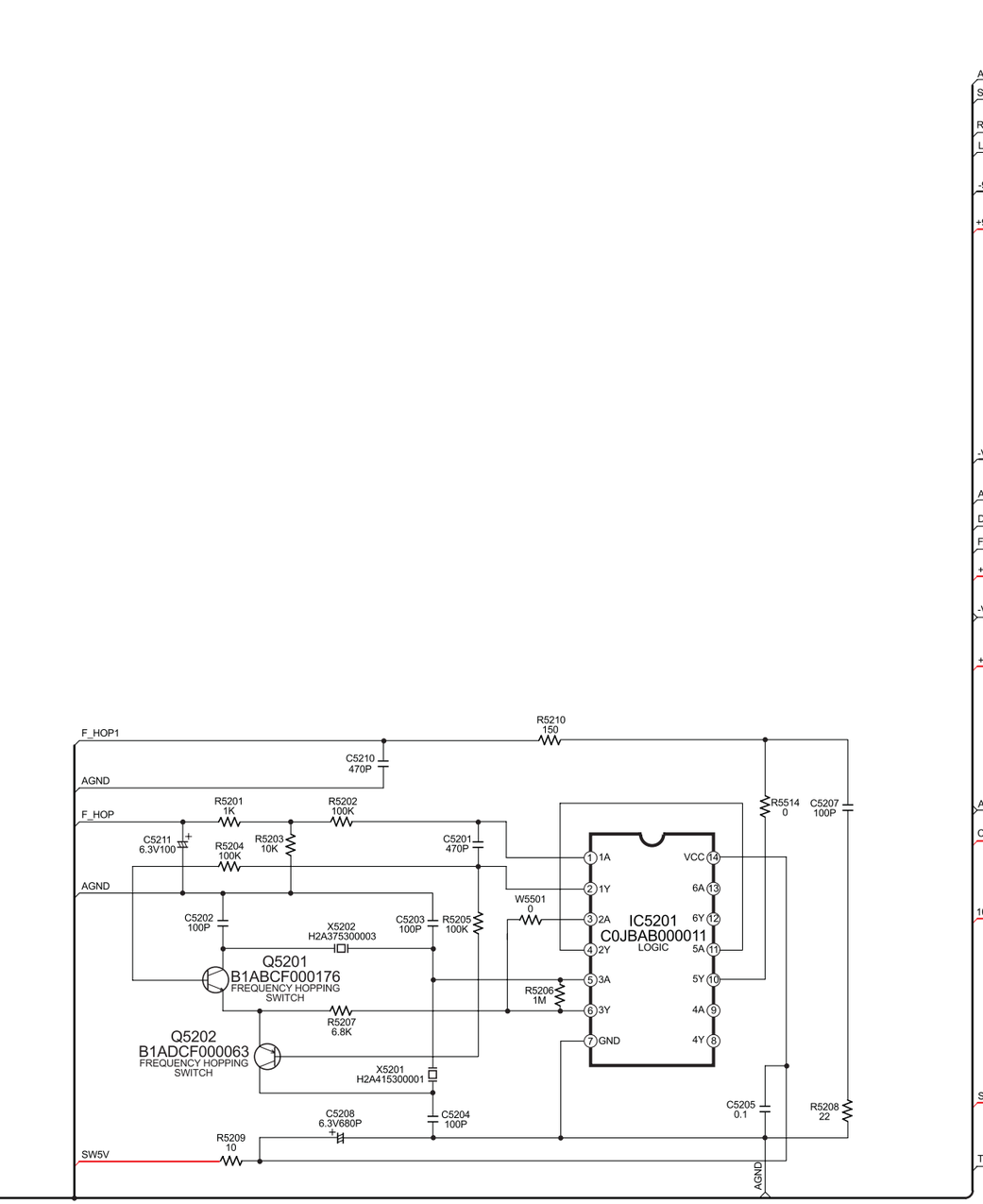
Q5101,Q5102
B1DEGM000026
CURRENT CONTROL SWITCH

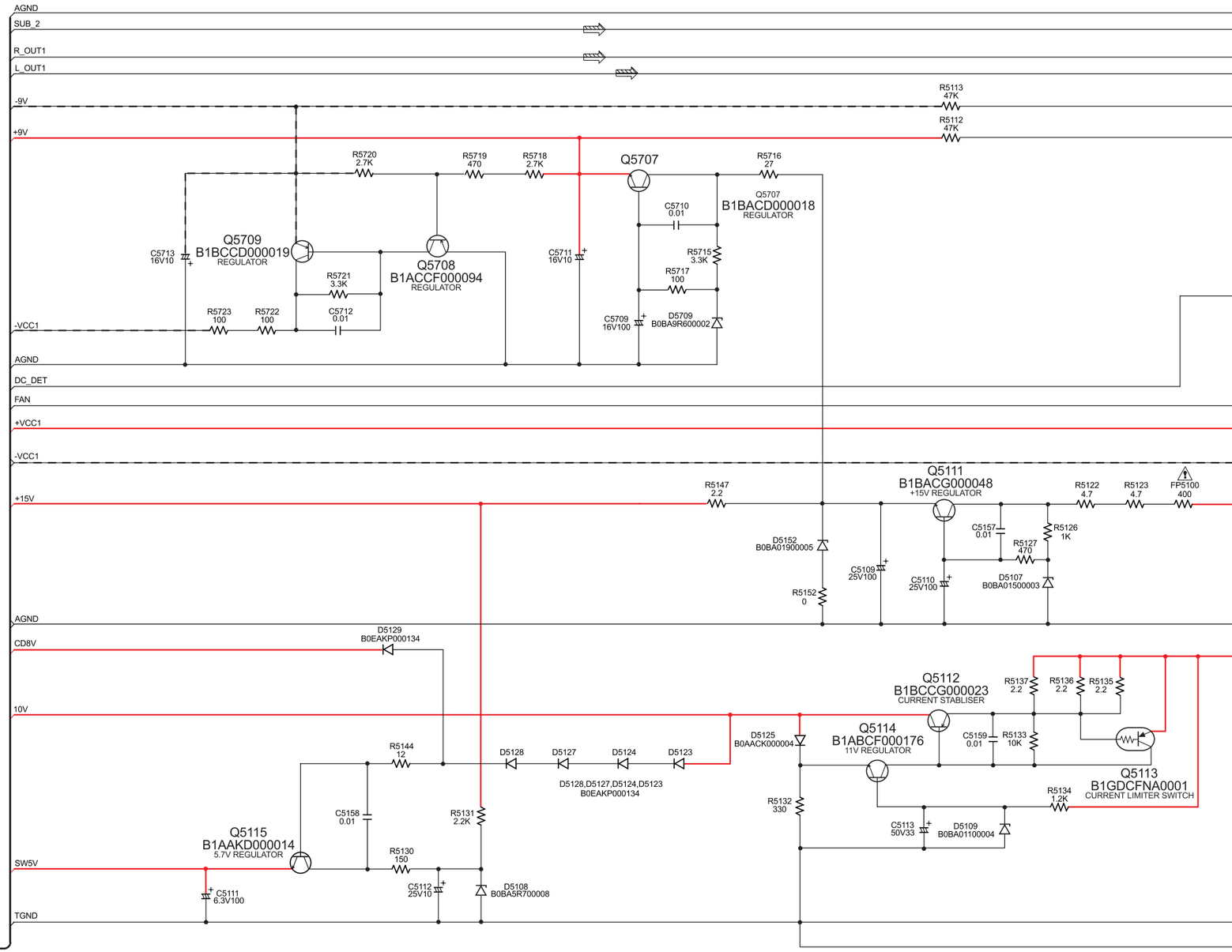
Q5102
C5552 0.1
C5104 35V4700
C5153 0.1
C5163 0.047
D5105 B0BA02300017
C5152 0.1
R5108 47
D5104 B0BA01100004
R5107 560
R5106 22K
Q5108
B1ABCF000176
SWITCH
R5109 1K
Q5109
2SB0709AHL
VOLTAGE REGULATOR
R5105 10K
R5110 2.2K
D5103 B0BA5R100013

SCHEMATIC DIAGRAM - 16

G POWER CIRCUIT

—— : +B SIGNAL LINE – – : -B SIGNAL LINE ⇨ : MAIN SIGNAL LINE





SCHEMATIC DIAGRAM - 15

G POWER CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

Q5150
B1GBCFJJ0047
PCONT SWITCH

Q5152
B11ABCF000176
SWTICH

Q5151
B1GBCFJJ0047
MODE SWITCH

IC5301
C1BA00000407
2-CH DIGITAL AMP

IC5501
C1BA00000407
2-CH DIGITAL AMP

Q5604
B1GBCFJA0002
FREQUENCY HOPPING SWITCH

TO B MAIN CIRCUIT (CN2809) ON SCHEMATIC DIAGRAM-10

CN5102: FAN, DC_DET, D-MUTE, +15V, AGND, L_OUT, R_OUT, AGND, WOOFER, F_HOP, T_GND

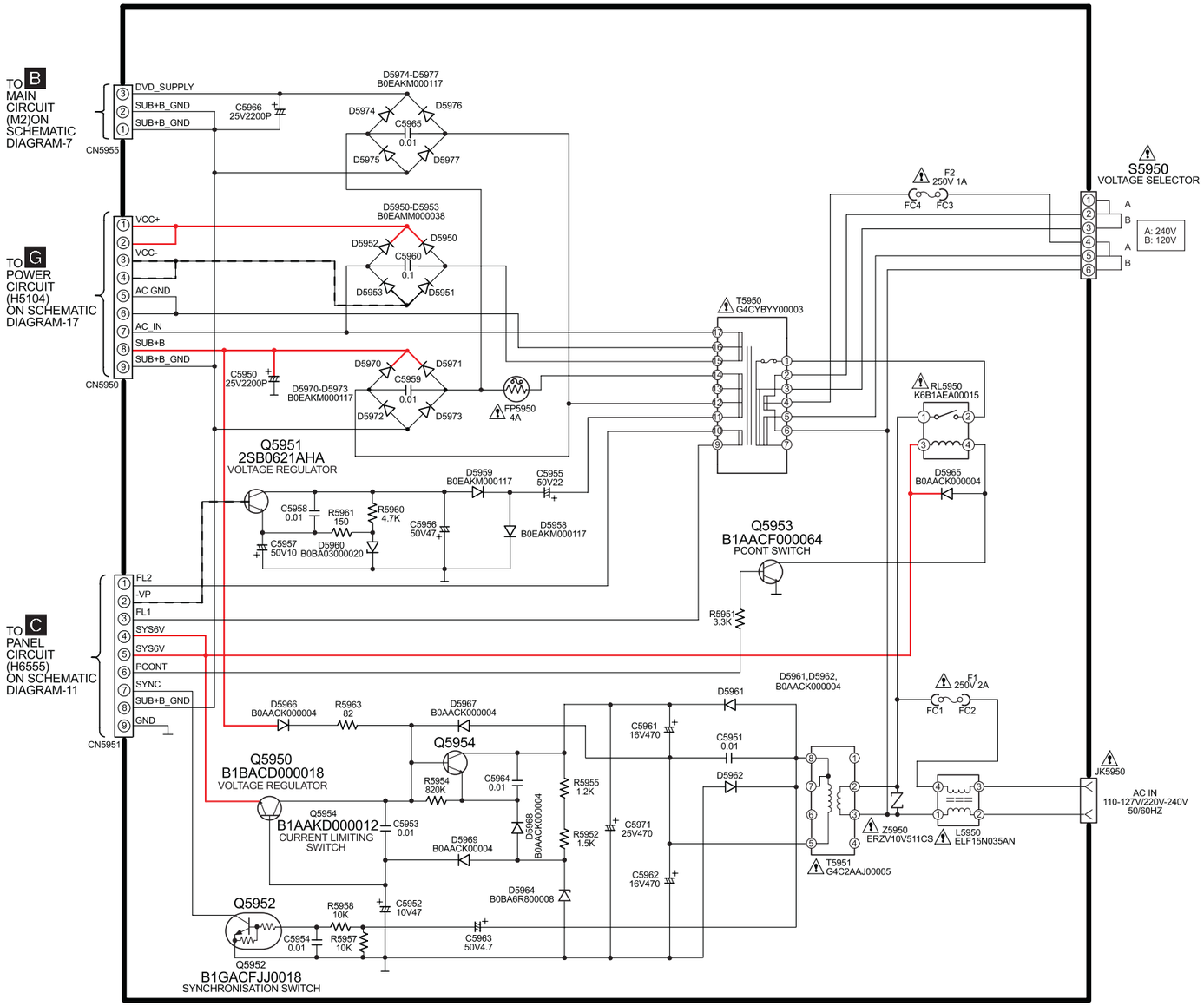
TO B MAIN CIRCUIT (CN2808) ON SCHEMATIC DIAGRAM-10

CN5103: PGND, SUB+B_GND, DGND, ASP_GND, CD8V, P_CON, MUTE_A, NC, 10V, +9V, -9V, SW5V

SCHEMATIC DIAGRAM - 14

E TRANSFORMER CIRCUIT (FOR GCS/GS/GCT ONLY)

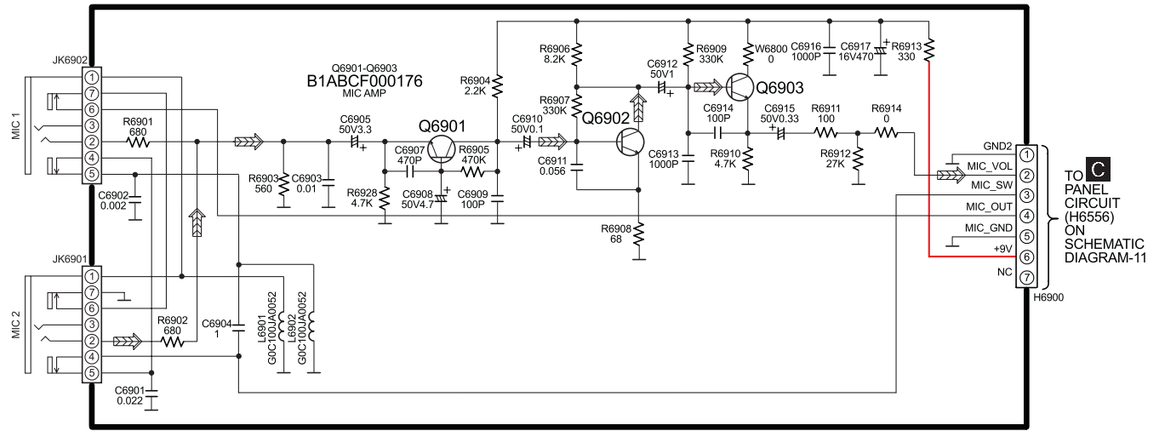
—— : +B SIGNAL LINE – – : -B SIGNAL LINE



SA-VK650GCS/GS/GCT TRANSFORMER CIRCUIT

F MIC CIRCUIT (FOR GC/GCS/GS/GCT ONLY)

—— : +B SIGNAL LINE : MIC SIGNAL LINE

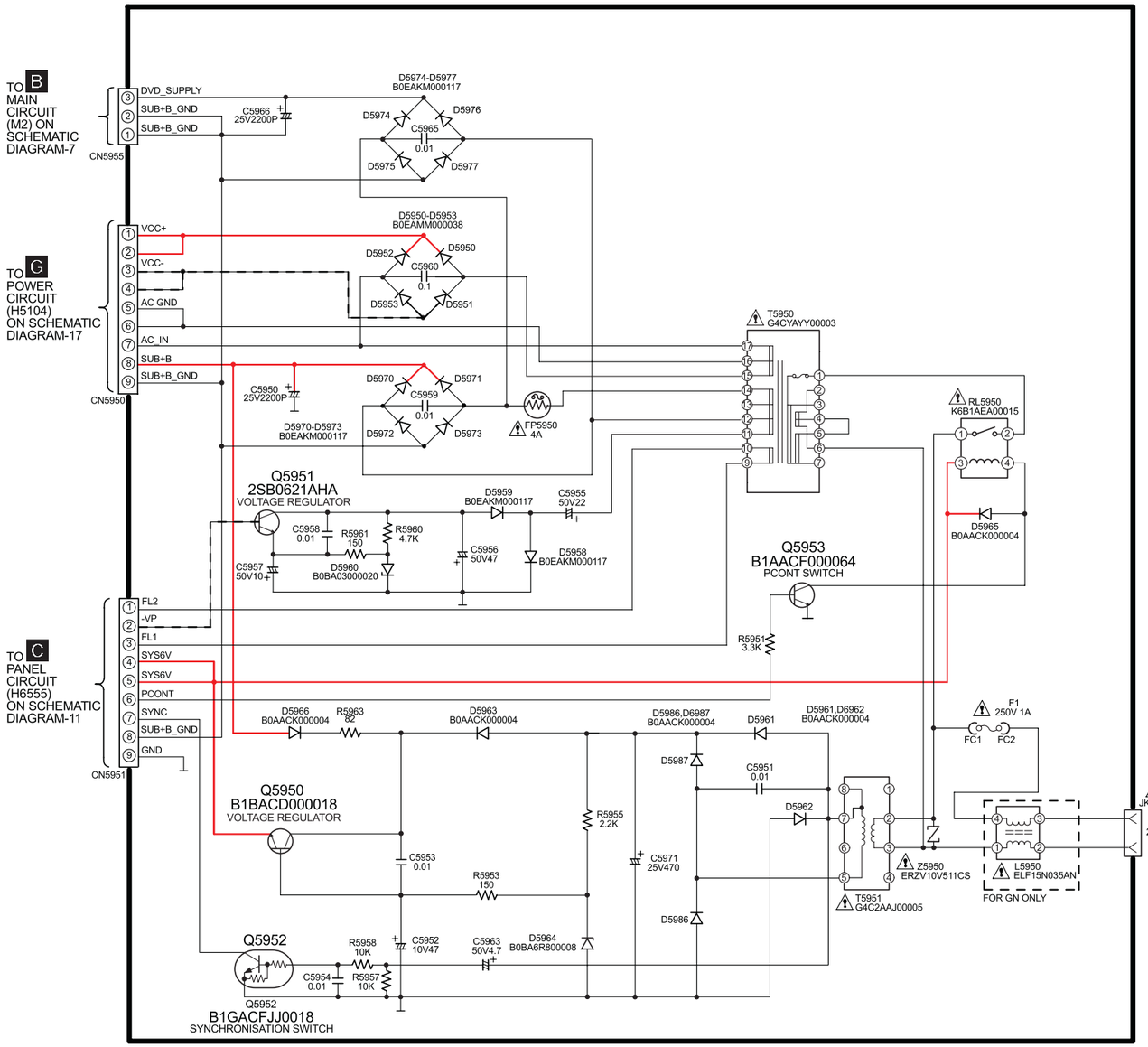


SA-VK650GC/GCS/GS/GCT MIC CIRCUIT

SCHEMATIC DIAGRAM - 13

E TRANSFORMER CIRCUIT (FOR GC/GN ONLY)

—— : +B SIGNAL LINE – – : -B SIGNAL LINE



SA-VK650GC/GN TRANSFORMER CIRCUIT

SCHEMATIC DIAGRAM - 12

C PANEL CIRCUIT

: -B SIGNAL LINE

: +B SIGNAL LINE

: MIC SIGNAL LINE

Q6907
B1GBCFJJ0051
MUTING SWITCH
W6802 0
R6945 5.6K
ECHO_MUTE
MIC_OUT
R6944 10K
C6937 10V1
R6943 15K
MIC_GND
BP_1
C6927 1000P
R6921 39
R6922 39
+9V
C6922 0.01
C6932 10V47
D6930 B0BC5R000009
C6921 0.1
W6805 0
IC6931
C1BB00001061
ECHO IC
R6927 4.7K
C6928 0.015
C6933 1
R6940 18K
R6941 15K
R6942 15K
C6923 0.01
R6923 120K
C6931 10V47
C6924 0.068
C6925 0.22
C6926 0.22
C6920 6800P
R6924 15K
C6918 0.068
R6925 15K
C6919 1500P
R6926 15K
1 NC
2 LPF_IN
3 LPF_OUT
4 OP1_OUT
5 OP1_IN
6 CC1
7 CC2
8 GND
16 NC
15 VCC
14 CLK
13 REF
12 OP2_IN
11 OP2_OUT
10 LPF2_IN
9 LPF2_OUT
IC6931
CN6808
KEY2
VREF+
V_JOG_A
V_JOG_B
GND2
MPORT_SW
NC
Q6906,Q6908,Q6909
B1GBCFJJ0051
SWITCH
Q6909
Q6906
Q6908
R6915 4.7K
R6916 4.7K
R6917 2.7K
R6918 4.7K
R6919 1K
R6920 4.7K
W6803 0
C6936 6.3V220
C6934 6.3V220
C6935 10V47
ECHO3
ECHO2
ECHO1
+9V
MIC_GND
R6952 5.6K
R6951 5.6K
R6935 0
IC6930
C0ABBB000244
SMT OP AMP IC
IC6930
2IN-
2IN+
2OUT
VCC+
VCC-
1IN+
1IN-
1OUT
-9V
C6930 100P
R6930 27K
R6931 180
MIC_VOL
R6929 8.2K
C6929 100P
R6946 39
Q6912
Q6912
B1ABCF000176
MIC LEVEL CONTROL SWITCH
R6949 10K
D6933
B0ACEL000004
R6948 10K
R6947 4.7K
SW5V
Q6904,Q6905
B1ABCF000176
SWITCH
R6933 150
R6934 47
Q6904
Q6905
R6937 1K
R6938 1K
Q6910
Q6911
Q6910,Q6911
B1GDCFJJ0047
MIC LEVEL SWITCH
D6931
B0ACEL000004
D6932
B0ACEL000004
MIC_LVL1
MIC_LVL2

FOR ALL SERIES EXCEPT GN

D TACT SWITCH CIRCUIT

: +B SIGNAL LINE

CP6201
KEY2I
VREF+I
V_JOG_AI
V_JOG_BI
GND
MPORT_SWI
R6493 10K
R6491 47K
R6492 47K
C6491 100P
C6492 100P
VR6491
EVEKE2F2524B
VOLUME JOG
B
COM
A
S6201 TAPE
S6202 DVD/CD
S6203 FWD
S6204 STOP
S6205 REW
S6206 REC
S6207 DECK 1/2
S6208 DISPPLAY /DEMO
S6209 MUSIC PORT
S6210 TUNER
R6202 1K
R6203 1K
R6204 1.2K
R6205 1.8K
R6206 2.2K
R6207 2.7K
R6208 4.7K
R6209 6.8K
R6210 10K
R6211 22K

SA-VK650GC/GCS/GN/GS/GCT TACT SWITCH CIRCUIT

1/2 2/2 SA-VK650GC/GCS/GN/GS/GCT PANEL CIRCUIT

SCHEMATIC DIAGRAM - 11

C PANEL CIRCUIT

– – : -B SIGNAL LINE
—— : +B SIGNAL LINE
: MAIN SIGNAL LINE
: MIC SIGNAL LINE

TO E TRANSFORMER CIRCUIT (CN5951) ON SCHEMATIC DIAGRAM-13/14

H6555 (9 8 7 6 5 4 3 2 1)
FL2 -VP FL1 SYS6V SYS6V PCONT SYNC STGND DGND

S6302 DISC CHECK R6303 1K
S6303 OPEN/CLOSE R6304 1K
S6304 DISC CHANGE R6305 1.2K
S6305 DISC 1 R6306 1.8K
S6306 DISC 2 R6307 2.2K
S6307 DISC 3 R6308 2.7K
S6308 DISC 4 R6309 4.7K
S6309 DISC 5 R6310 6.8K
S6310 MIC VOL+ R6311 10K
S6311 MIC VOL- R6312 22K
S6312 DECK 2 R6313 68K

R6301 10K
K6902...GN 0
S6107 DECK 1
S6105 SUBWOOFER
S6104 MULTI REMASTER
S6103 SOUND EQ
S6102 S.SEQ
S6101 POWER
R6108 2.7K
R6106 2.2K
R6105 1.8K
R6104 1.2K
R6103 1K
R6102 1K
R6199 10K
D6458 B3AAA0000803
R6458 3.9K
VREF+ KEY3 GND2 MIC_SW KEY1 VREF+ SYS6V

R6631 47
R6632 47
D6635 B0BC5R600003
C6635 50V22
C6632 50V22
-VP_A GND2

FL6602 A2BD000000151
GND2 C6631 50V22
SG1 SG2 SG3 SG4 SG5 SG6 SG7 SG8 SG9 SG10 SG11 SG12 SG13 SG14 SG15 SG16
GR1 GR2 GR3 GR4 GR5 GR6 GR7 GR8 GR9 GR10 GR11 SG17

IC6601
C0HBB0000057
FL DRIVER
VSS VDD G1 G2 G3 G4 G5 G6 G7 G8 G9
NC NC NC NC OSC NC DIN CLK STB K1 K2
G10 G11 G12/S17 VEE S16 S15 S14 S13 S12 S11 S10
GR10 GR11 SG17 SG1 SG2 SG3 SG4 SG5 SG6 SG7
VSS VDD S1 S2 S3 S4 S5 S6 S7 S8 S9
SG16 SG15 SG14 SG13 SG12 SG11 SG10 SG9 SG8

R6605 82K
FL_DOUT R6604 220
FL_CLK R6603 220
FL_CS R6601 470
W6806 0
C6604 100P
C6603 100P
C6601 100P
C6636 100P
C6623 50V22

HP_SW GND1
DVREF+ PLGND DECK2 PHOTO_1 PHOTO_2 HALF_PB MODE_PB MOT10V PLG2 PLG1 PLGND
R6960 0
R6403 2.7
R6404 2.7
R6959 0
C6402 0.01
W6807 0
R6401 10K
R6402 10K
C6404 100P
R6405 270K
R6406 270K
C6403 100P
C6401 0.1
C6405 100P
R6416 1K
R6415 22K
R6412 1K
R6411 22K
R6421 10K
C6421 100P
C6425 100P
R6425 10K
Q6415
Q6411
Q6425
Q6421
Q6421,Q6425
B1GBCFJJ0051
PLUNGER ON/OFF SWITCH

Q6411,Q6415
B1ACKD000006
PLUNGER ON/OFF SWITCH

Z6400
B3RAB0000125
REMOTE SENSOR
C6481 6.3V47
C6482 1000P
C6483 0.01
R6481 27

D6701 B0BC3R100004
D6707 B2AEA0000083
D6702 B0BC2R100004
D6709 B3AEA0000083
R6714 1K
R6702 1K
R6710 1K
R6713 1K
W6811 0
R6703 2.7K
R6712 2.7K
Q6702
Q6703
Q6701
Q6701-Q6703
B1GBCFJN0033
LED DRIVE

GND2 SW5V VREF+ RMT GND2 LED_CTRL2 LED_CTRL2 LED_CTRL1

VREF+ PCONT GND2 DVREF+
R6957 470K
R6954 47K
R6956 4.7K
R6950 1K
Q6804
Q6805
B1GACFJJ0018
PCONT SWITCH
Q6803
D6803 B0ACCE000003
R6900 0
Q6803,Q6804
B1ACCF000094
DECK SUPPLY CONTROL SWITCH
SYS6V

HP_GND HP_R HP_L HP_SW GND2

TO I DECK MECHANISM CIRCUIT (CN971) ON SCHEMATIC DIAGRAM-18
CN6401 (1 P2, 2 P1, 3 DVREF, 4 PL_GND, 5 DECK_2, 6 PHOTO_PB, 7 PHOTO_RB, 8 HALF_PB, 9 VREF_GND, 10 MODE_PB)

JK6551 PHONES
C6553 0.01 C6551 0.01 C6552 0.01
L6553 G0C101JA0052
L6552 G0C101JA0052
L6551 G0C101JA0052

CN6806
HP_R HP_GND HP_L MIC_OUT MIC_GND +9V -VP_A MPORT_R MPORT_L MIC_LVL2 MIC_LVL1 LED_CTRL2 LED_CTRL1 -9V
W6804 0 GND2 PLGND SYNC PCONT SYS6V
TO B MAIN CIRCUIT (CN2806) ON SCHEMATIC DIAGRAM-10

CN6807
SYS6V PCONT SYNC SW5V GND2 +VREF RMT PHOTO_1 PHOTO_2 KEY1 KEY2 KEY3 DECK2 FL_CLK FL_DOUT FL_CS NC VJOG_A VJOG_B ECHO1 ECHO2 ECHO3 ECHO_MUTE GND1 MOT10V PLG2 PLG1 MODE_PB HALF_PB DVREF+
W6801 0 GND2
TO B MAIN CIRCUIT (CN2807) ON SCHEMATIC DIAGRAM-10

MPORT_GND MPORT_R MPORT_L MPORT_SW GND2
L6555 G0C100JA0052
L6556 G0C100JA0052
L6554 G0C100JA0052
C6554 0.01 C6555 0.01 C6556 0.01
JK6552 MUSIC PORT INPUT

+9V MIC_GND MIC_OUT MIC_SW MIC_VOL GND2
W6808 0
W6809 0
TO F MIC CIRCUIT (H6900) ON SCHEMATIC DIAGRAM-14
H6556

FOR ALL SERIES EXCEPT GN

SCHEMATIC DIAGRAM - 10

B MAIN CIRCUIT

: MAIN SIGNAL LINE : MIC SIGNAL LINE :PLAYBACK SIGNAL LINE

: +B SIGNAL LINE : -B SIGNAL LINE :RECORD SIGNAL LINE

IC2801
C2CBYY000267
MICROPROCESSOR

IC2802
EEPROM
(NOT SUPPLIED)

Q2806
B1GBCFJJ0051
RESET SWITCH (MICRO-P)

Q2914
B1ACKD000006
SUPPLY CONTROL SWITCH

Q2913
B1GBCFJJ0051
PLUNGER ON/OFF SWITCH

Q2978
B1GDCFJJ0047
REC: ON/OFF CONTROL SWITCH

Q2979
B1GDCFJJ0047
SUPPLY CONTROL SWITCH (DECK MOTOR)

TO C PANEL CIRCUIT (CN6806) ON SCHEMATIC DIAGRAM-11

TO FAN

TO G POWER CIRCUIT (CN5102) ON SCHEMATIC DIAGRAM-15

TO G POWER CIRCUIT (CN5103) ON SCHEMATIC DIAGRAM-15

TO H DECK CIRCUIT (CN1001) ON SCHEMATIC DIAGRAM-18

TO CRS1D (CN1)

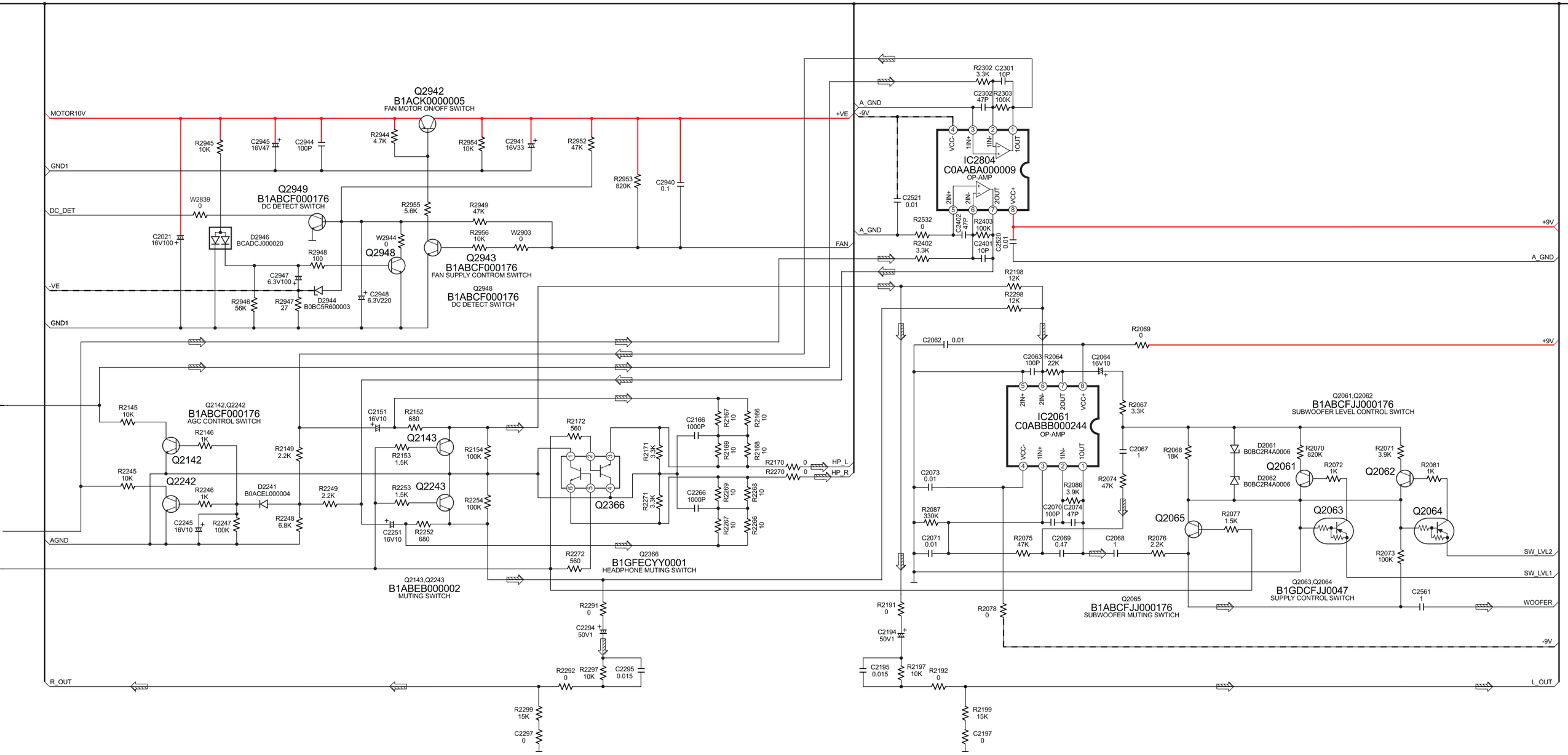
TO C PANEL CIRCUIT (CN6807) ON SCHEMATIC DIAGRAM-11

SCHEMATIC DIAGRAM - 9

B MAIN CIRCUIT

: MAIN SIGNAL LINE

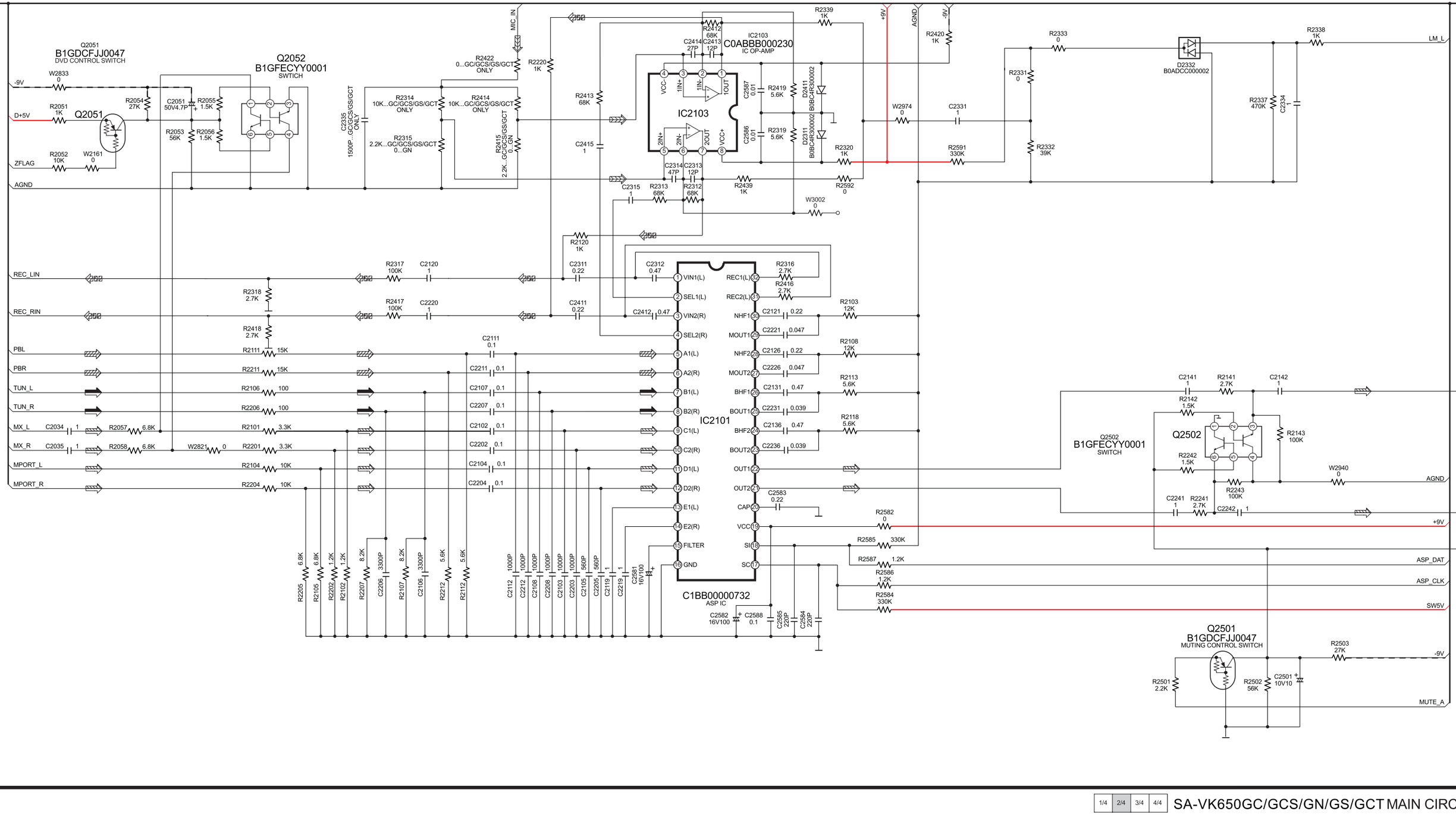
: +B SIGNAL LINE – – : -B SIGNAL LINE



B MAIN CIRCUIT

: MAIN SIGNAL LINE : FM/AM SIGNAL LINE :PLAYBACK SIGNAL LINE

: +B SIGNAL LINE : -B SIGNAL LINE :RECORD SIGNAL LINE

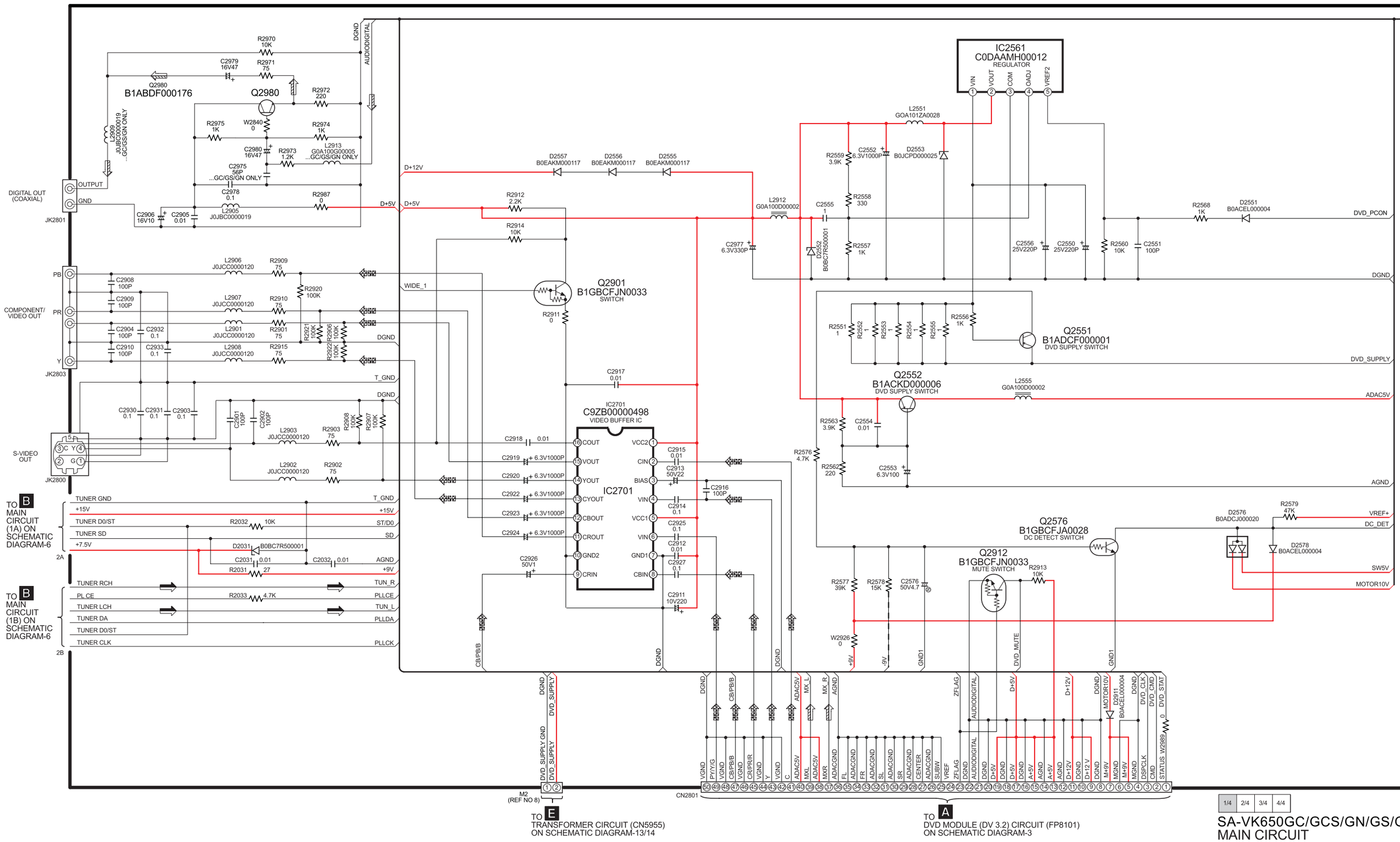


SCHEMATIC DIAGRAM - 7

B MAIN CIRCUIT

: MAIN SIGNAL LINE : FM/AM SIGNAL LINE : DVD VIDEO SIGNAL LINE

: +B SIGNAL LINE : -B SIGNAL LINE



1/4 | 2/4 | 3/4 | 4/4

SA-VK650GC/GCS/GN/GS/GCT
MAIN CIRCUIT

SCHEMATIC DIAGRAM - 6

B MAIN(TUNER) CIRCUIT

: +B SIGNAL LINE
: FM SIGNAL LINE
: AM SIGNAL LINE
: FM/AM SIGNAL LINE
: FM OSC SIGNAL LINE
: AM OSC SIGNAL LINE

J TUNER PACK CIRCUIT

FM EXT ANT
75 OHM
GND
AM LOOP ANT
AM EXT ANT JK2601

Q1 B1CECC000003
Q2 B1AAAC000016
Q3,Q4 B1AAAC000015
Q3
Q4

Q2601 B1AABC000003 FM IF AMP
Q2601
Q2606

CF2601 J0B1075AA014
CF2602 J0B1075AA014

D2602 B0CDBB000015
D2601 B0BC5R000009

L2601 G2A411C00001
L2602 G2BPC0000016

IC2601 C1BB00000962
FM/AM IF AMP
DET/AM OSC MIX/
FM MPX

IC2601
OSC OUT, OSC, AFC, AM RF IN, AGC, AM OUT, DET OUT, PILOT IN, MPX IN, PILOT OUT, RCH, LCH
FM IF IN, AM MIX OUT, REG, AM IF IN, GND, SD, ST, FM DET, VCC, STRQ, FM/AM, MONO

Q2606 B1GCCFJJ0016
TUNER 15V
SUPPLY SWITCH

IC2602 C1CB00001937
PLL FREQUENCY SYNTHESIZER
XOUT, VSS, AOUT, AIN, PD, VDD, FMIN, AMIN, MONO, IFIN
XIN, CE, DI, CL, DO, AM, LW, SDC, STRQ, FM

Z2602 G2BAD0000003

X2602 H3F1065A0002
X2603 H0H720400007

TGND 15V — TO B MAIN CIRCUIT (2A) ON SCHEMATIC DIAGRAM-7 — 1A
DO/ST
SD
+7.5V

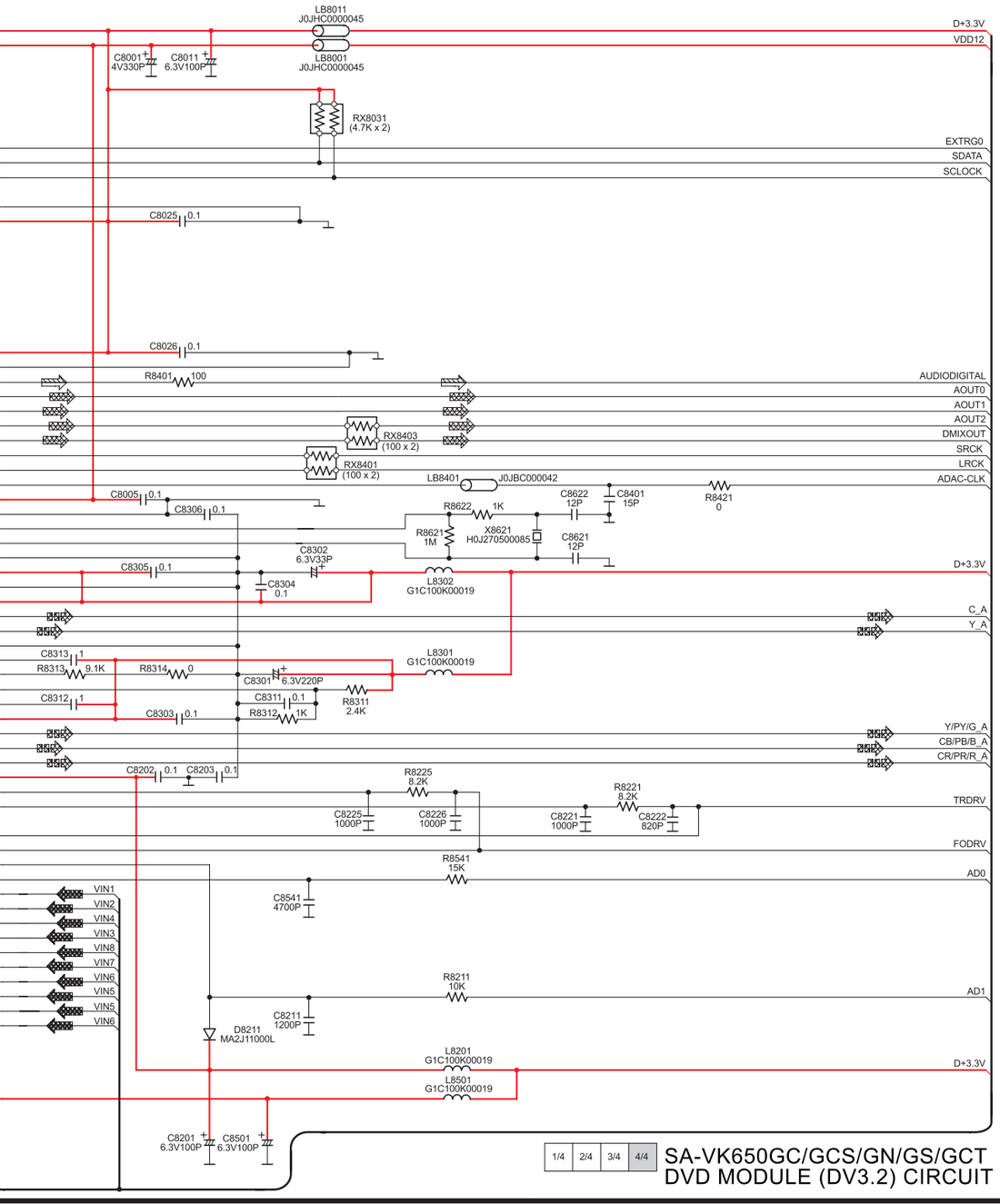
RCH
CE
LCH
PLLDA
DO/ST
PLLCLK — TO B MAIN CIRCUIT (2B) ON SCHEMATIC DIAGRAM-7 — 1B

SA-VK650GC/GCS/GN/GS/GCT MAIN(TUNER) CIRCUIT

SCHEMATIC DIAGRAM - 5

A DVD MODULE (DV3.2) CIRCUIT

: CD-DA SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE



A DVD MODULE (DV3.2) CIRCUIT

: +B SIGNAL LINE

IC8051
C3ABPG000145
64 SDRAM IC

IC8001
MN2DS0009VP
DV3.2 IC

IC8606
C0EBE0000455
RESET IC

IC8601
C0EBA0000029
RESET IC

SCHEMATIC DIAGRAM - 3

A DVD MODULE (DV3.2) CIRCUIT

: MAIN SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE

IC8420
C0FBBK000049
2-CH DAC IC

ZEROL ZEROR VOUTL VOUTR VCOM AGND VCC NC NC
XMS MC MD SCK DATA BCK LRCK

Y/PY/G
CB/PB/B
CR/PR/R
Y
C
STBDAC
SBT3
SBO3
ADAC-CLK
DMIXOUT
SRCK
LRCK

LB8303 LB8304 LB8305 LB8301 LB8302 K8421 LB8421 LB8422 — J0JBC0000042 / 0 / ERJ2GE0R00X

C8424 0.1 C8422 0.1
R8420 2.2K
C8423 6.3V33P
C8421 6.3V100P

LB8423 LB8424 LB8491 — ERJ2GE0R00X

FL8103 FL8102 FL8101 — F1H0J1050022
FL8104 — F1J1E1040022

QR8420
UNR521100L
AUDIO MUTING SWITCH

P13
AUDIODIGITAL
A+5V
2R7V
M+9V
D+5V

LB8690 J0JBC0000106
C8691 0.1
LB8691 ERJ2GEJ101X
C8695 0.1
LB8692 ERJ2GEJ101X
LB8693 ERJ2GEJ101X

VGND Y/PY/G VGND CB/PB/B VGND CR/PR/R VGND Y VGND C ADAC5V MIX-L ADAC5V MIX-R ADGND FL ADGND FR ADGND ADGND ADGND ADGND A-REF ZFLAG&AMUTE DGND AUDIODIGITAL DGND D+5V DGND D+5V DGND A+5V AGND A+5V AGND 2R7V DGND 2R7V DGND M+9V MGND M+9V MGND DOP_CPU-CLK DOP_CPU-CMD DOP_CPU-STAT

FP8101

TO B MAIN CIRCUIT (CN2801) ON SCHEMATIC DIAGRAM-7

IC8611
C3EBGC000055
16M EEPROM IC
(NOT SUPPLIED)

A0 A1 A2 GND VCC WP SCL SDA
C8611 0.1
RX8611 (4.7K x 2)

SCL
SDA
R8611 100
OP_CPU_CLK
OP_CPU_CMD
RX8691 (10K x 2)
SBT3
STBDAC
RX8001 (10K x 2)
EXTRG0
RX8032 (4.7K x 2)

IC8651
RFKWMHA0H160...GC/GS/GN
RFKWMHA0J160...GCSS/GCT
16M FLASH ROM IC

A15 A14 A13 A12 A11 A10 A9 A8 A19 A20 XWE XRESET NC WP/ACC RDY/XBSY A18 A17 A7 A6 A5 A4 A3 A2 A1 A16 XBYTE VSS DQ15/A-1 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 VDD DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 XOE VSS XCE A0

EXADR15 EXADR14 EXADR13 EXADR12 EXADR11 EXADR10 EXADR9 EXADR8 EXADR19 EXADR20 NEXWE PNRST EXADR18 EXADR17 EXADR7 EXADR6 EXADR5 EXADR4 EXADR3 EXADR2 EXADR1 EXADR16 EXDT15 EXDT7 EXDT14 EXDT6 EXDT13 EXDT5 EXDT12 EXDT4 EXDT11 EXDT3 EXDT10 EXDT2 EXDT9 EXDT1 EXDT8 EXDT0 NEXOE NEXCE EXADR0

C8651 0.1 C8652 0.1

Y/PY/G — K8331 0 — R8332 0 — R8331 68 — Y/PY/G_A
CB/PB/B — K8335 0 — R8335 68 — CB/PB/B_A
CR/PR/R — K8341 0 — R8341 68 — CR/PR/R_A
Y — K8321 0 — R8322 0 — R8321 68 — Y_A
C — K8325 0 — R8326 0 — R8325 68 — C_A

K8009 0 K8008 0
K8004 0 K8003 0

1/4	2/4	3/4	4/4

SA-VK650GC/GCS/GN/GS/GCT
DVD MODULE (DV3.2) CIRCUIT

SCHEMATIC DIAGRAM - 2

A DVD MODULE (DV3.2) CIRCUIT

: +B SIGNAL LINE : CD-DA SIGNAL LINE

TO SPINDLE MOTOR

FP8251: TRV_INNER_SW, DGND, TRVM+, TRVM-, SPM+, SPM-

IC8251 C0GBG0000048 DRIVER IC

BIAS1, VIN1, VIN2, OPIN+, OPIN-, OPOUT, GND(PRE), FIN, VCC(CH1.2), MUTE12, GND(CH1.2), VO2-, VO2+, VO1-, VO1+, LDCNT, MUTE3, TRIN, BIAS2, LDIN, VIN3, PREVCC, FIN, VCC(CH3.4), MUTE4, GND(CH3.4), VO3-, VO3+, VO4-, VO4+

TRV-I-SW, D+5V, FODRV, TRDRV, AD1, VHALF, SPMUTE, DRV0, DRV1, M+9V, TRVFTMUTE

C8251 6.3V220P; C8252 0.1; C8253 0.1; C8256 0.1; C8255 16V22P; C8258 0.1; C8257 16V47P; C8261 0.1; C8262 0.1; C8231 0.1; C8232 0.1

R8261 82k; R8263 82k; R8262 15K; R8264 15K; R8230 2.2K; R8231 22K; R8232 7.5K; R8251 6.8; K8251 0

LB8260 ERJ3GEY0R00V; LB8259 ERJ3GEY0R00V; LB8258 ERJ3GEY0R00V; LB8257 ERJ3GEY0R00V

FP8531: T+, F+, F-, T-, HFM, TA(DVD), TB(DVD), TD(DVD), TC(DVD), FE2(DVD/CD), FE1(DVD/CD), GND, RF, VREF2(RF-), PIN(DVD), LDCD, LDGND, LDDVD, GND(OEIC), VREF1, VCC, SUB2, SUB1, PIN(CD), SUBSEL, GND(VRCD)

TO OPTICAL PICKUP UNIT CIRCUIT ON SCHEMATIC DIAGRAM-1

RX8532 (56 x 4); RX8534 (56 x 2); RX8531 (56 x 2); RX8533 (56 x 2)

VIN1, VIN2, VIN4, VIN3, VIN8, VIN7, RFINP, RFINN, LPC1, VREFH, VIN6, VIN5, LPC2, RAM_CD

C8511 1; C8512 1; C8531 100P; C8533 0.1; C8532 220P

R8531 1.5K; R8532 2.2K; R8533 0

LB8561 J0JBC0000042; LB8551 J0JBC0000042; LB8531 ERJ2GE0R00X

IC8151 C0DBEHG00006 REGULATOR

CTL, VCC, GND, OUT, ADJ

R8153 620; R8154 1K; C8152 1; C8151 4.7

VDD12, 2R7V, D+3.3V

IC8111 C0CBCBD00018 3.3 REGULATOR IC

VO, NC, GND, CN, VIN, NC, NC, Cont

C8112 1; C8113 470P; C8111 0.1; RX8111 (22K x 2)

QR8111 XP0621400L SWITCH

D+5V, VDD12, HFMON

QR8571 UNR511V00L SUPPLY CONTROL SWITCH

D8571 MA2J72800L

LB8571 J0JBC0000042

C8572 0.1; C8571 10

L8550 G1C100KA0055

A+5V

LB8530 J0JHC0000045

C8561 0.1; R8567 51; R8566 56; C8563 6.3V47P; R8563 1K; C8562 16V10P; C8564 1; C8550 6.3V33P; R8568 47K; R8565 2.2; R8564 22

Q8562 B1ADGB000008 SWITCH

R8561 0; Q8561 2SD1819A0L SWITCH; R8562 1K

LPC02

C8530 0.1

AD0

C8551 0.1; R8557 51; R8556 56; C8553 6.3V47P; R8553 1K; C8552 16V10P; C8554 1; R8558 47K; R8555 2.2; R8554 68; R8559 15K

Q8552 B1ADGB000008 SWITCH

Q8551 2SD1819A0L SWITCH; R8551 0; R8552 1K

LPC01

OP_CPU_CLK, OP_CPU_STAT, OP_CPU_CMD

IC8691 C0JBAA000346 AND GATE LOGIC IC

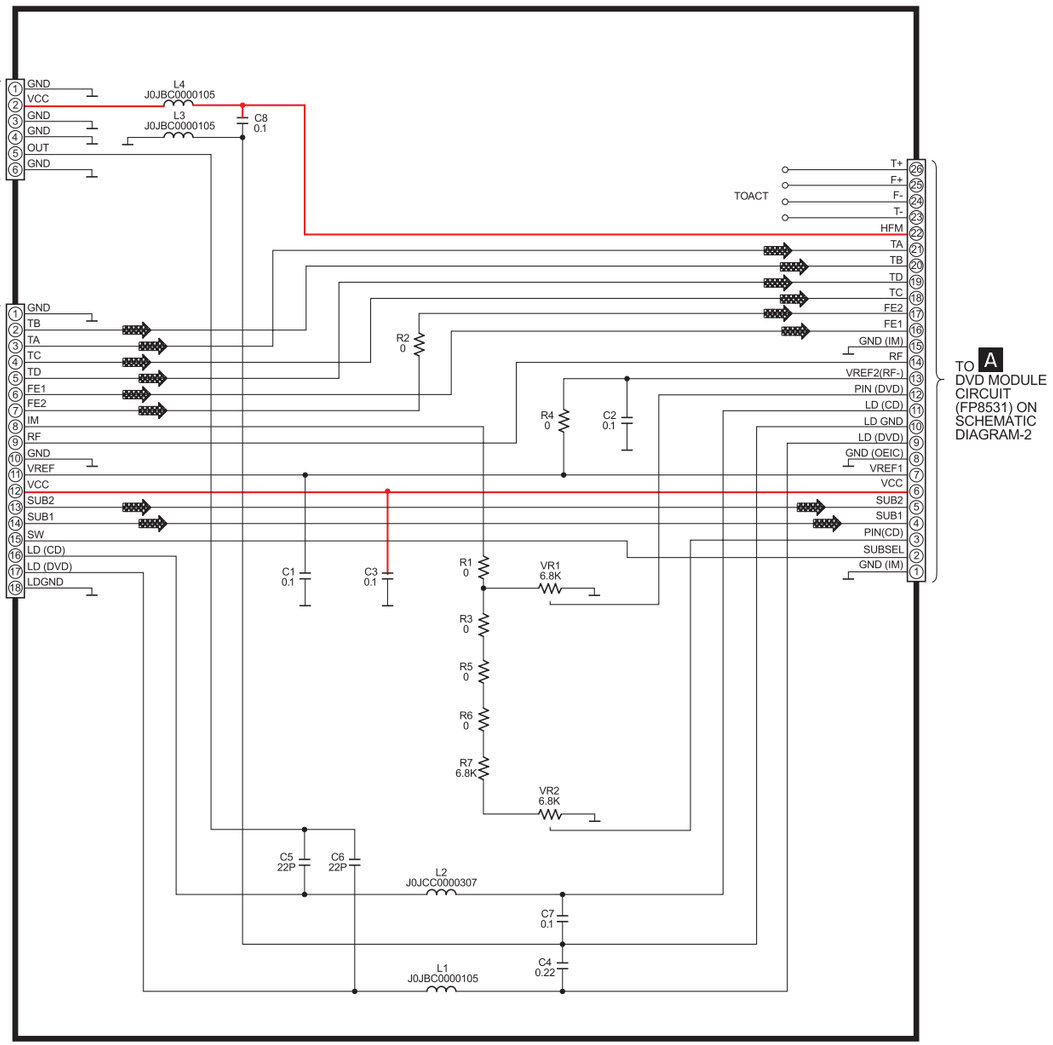
IC8695 C0JBAA000346 AND GATE LOGIC IC

VCC, GND

SCHEMATIC DIAGRAM - 1

OPTICAL PICKUP UNIT CIRCUIT

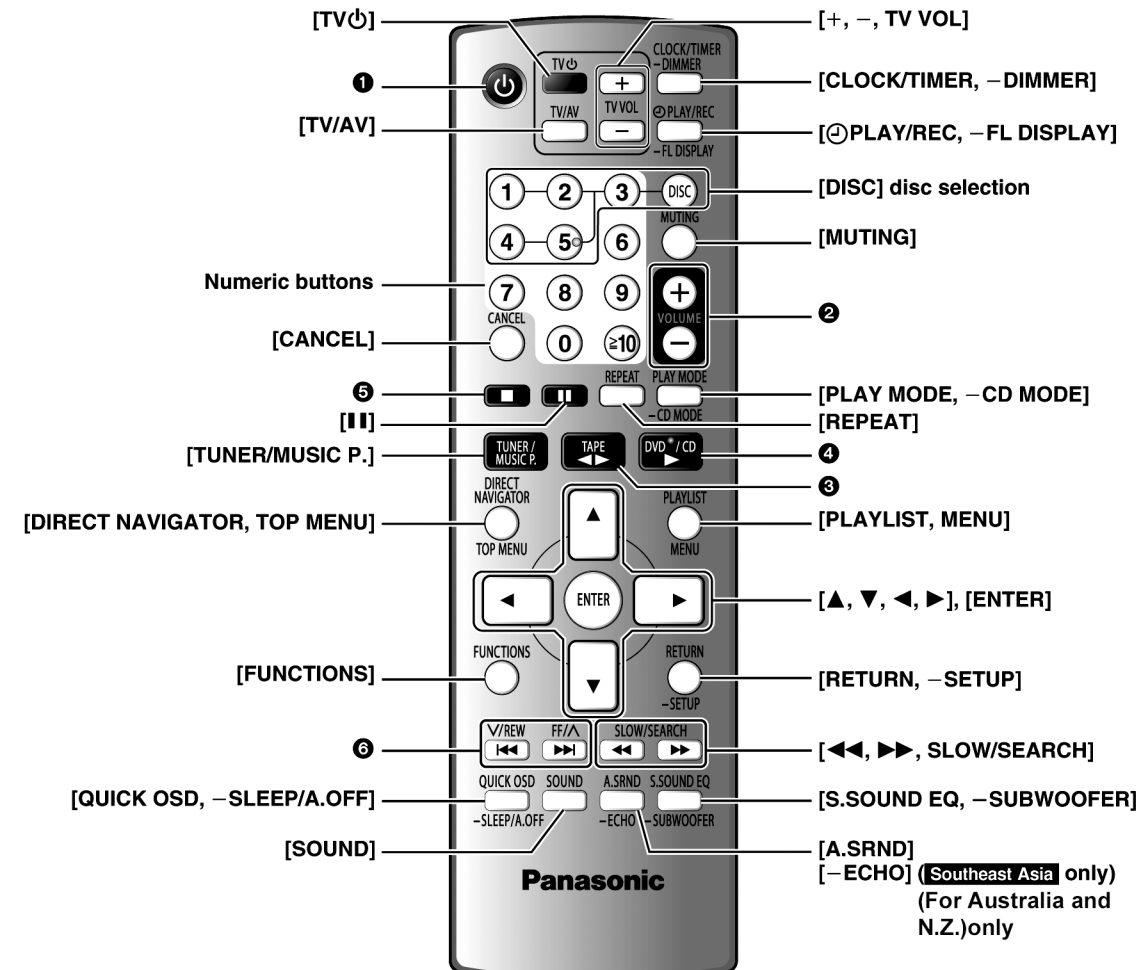
: +B SIGNAL LINE : CD-DA SIGNAL LINE



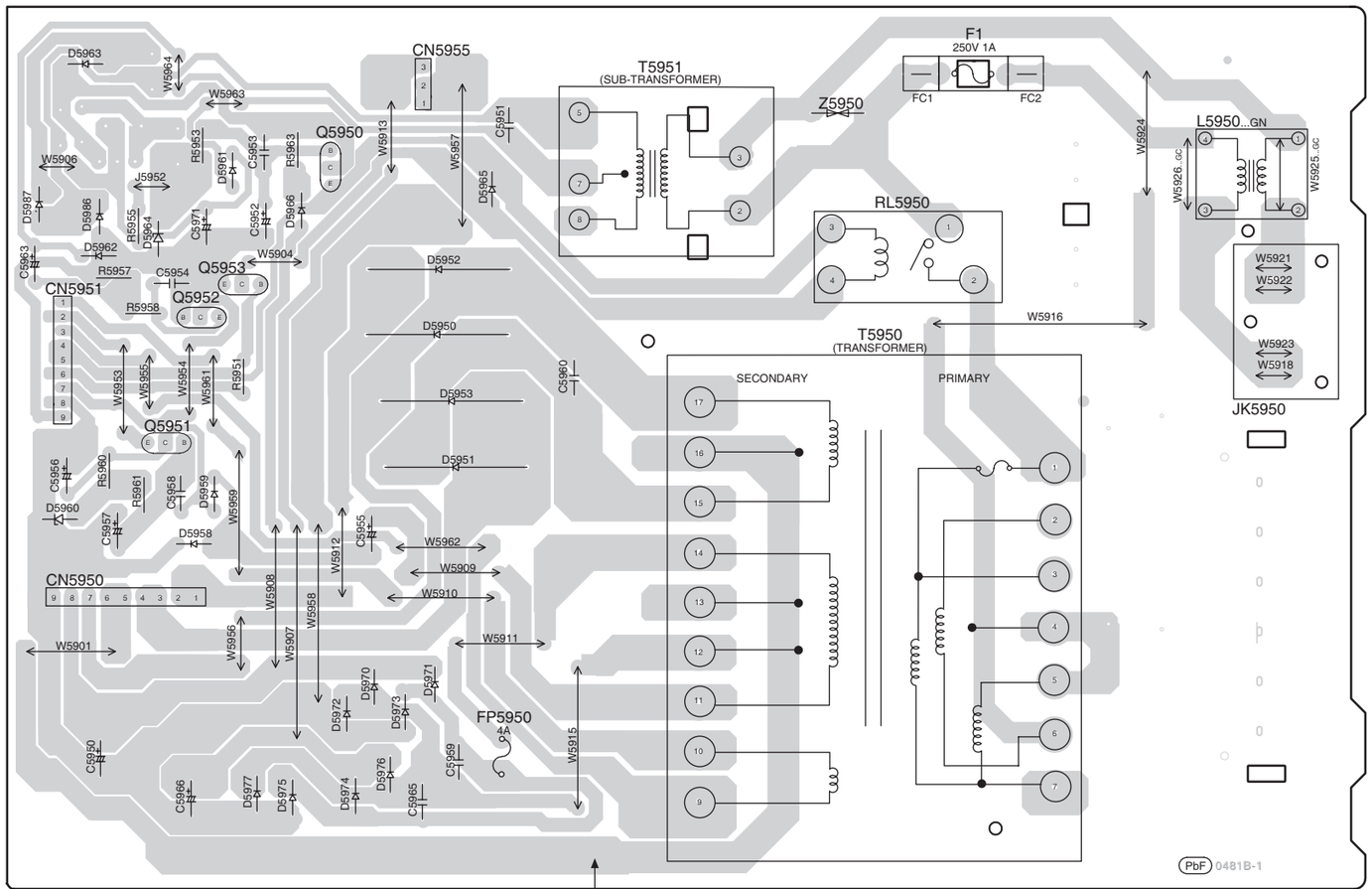
SA-VK650GC/GCS/GN/GS/GCT OPTICAL PICKUP UNIT CIRCUIT

Remote control

Buttons labelled such as ❶ function in exactly the same way as the buttons on the main unit.
To use functions labeled with "−":
Press and hold the button for at least 2 seconds.

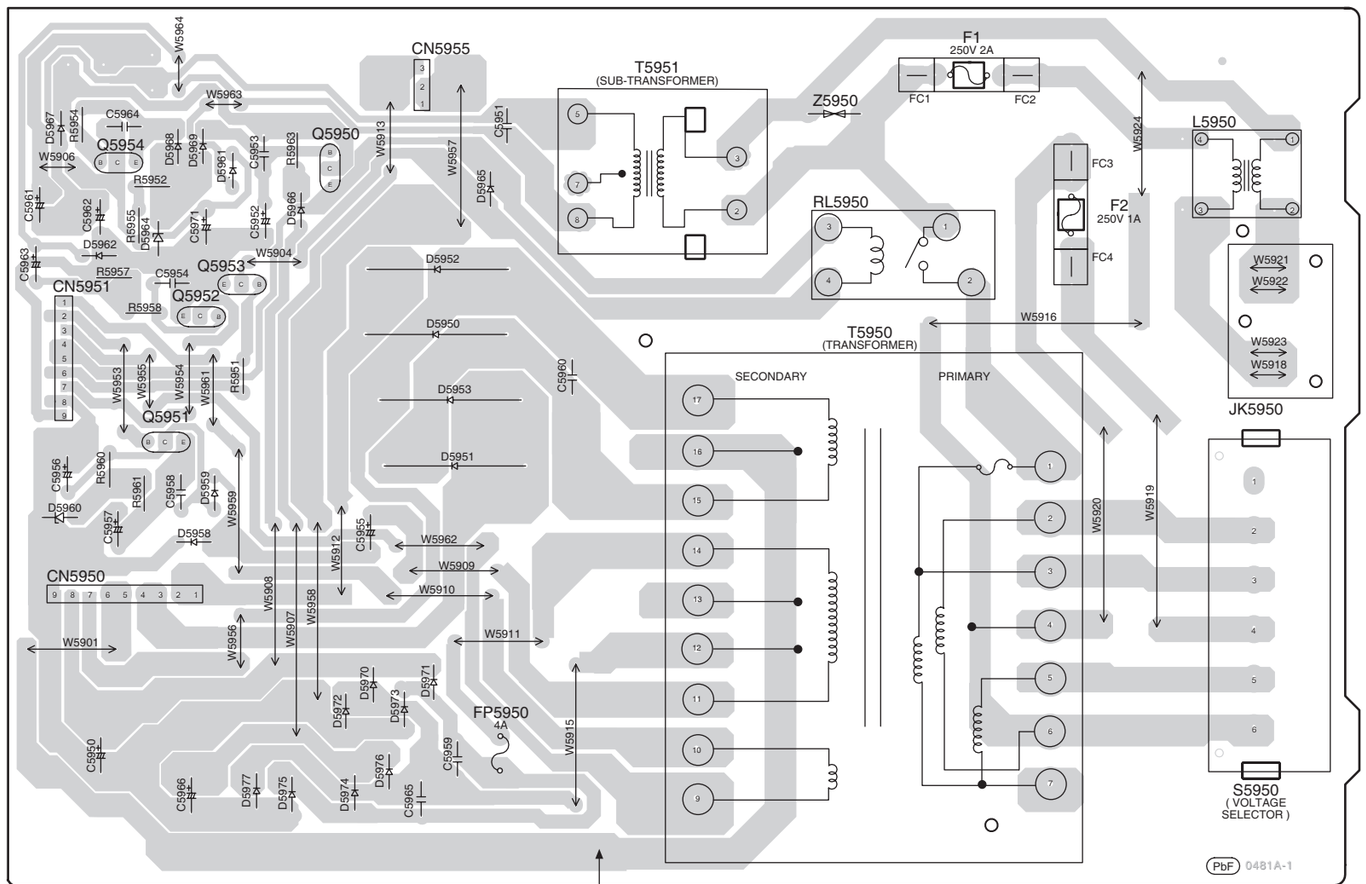


E TRANSFORMER P.C.B (REPX0519B...GN)
(REPX0519C...GC)



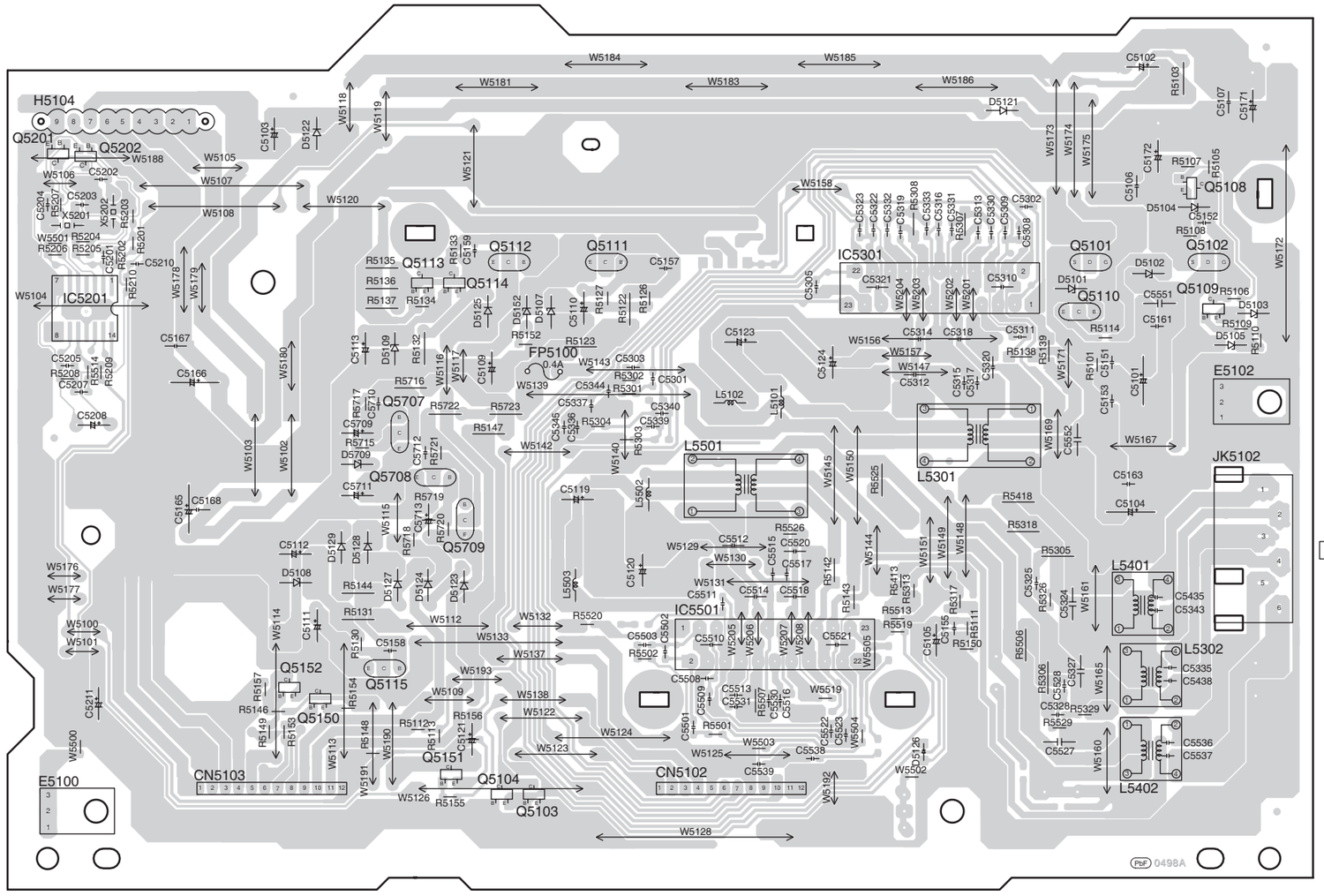
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

E TRANSFORMER P.C.B (REPX0519A...GS/GCS/GCT)

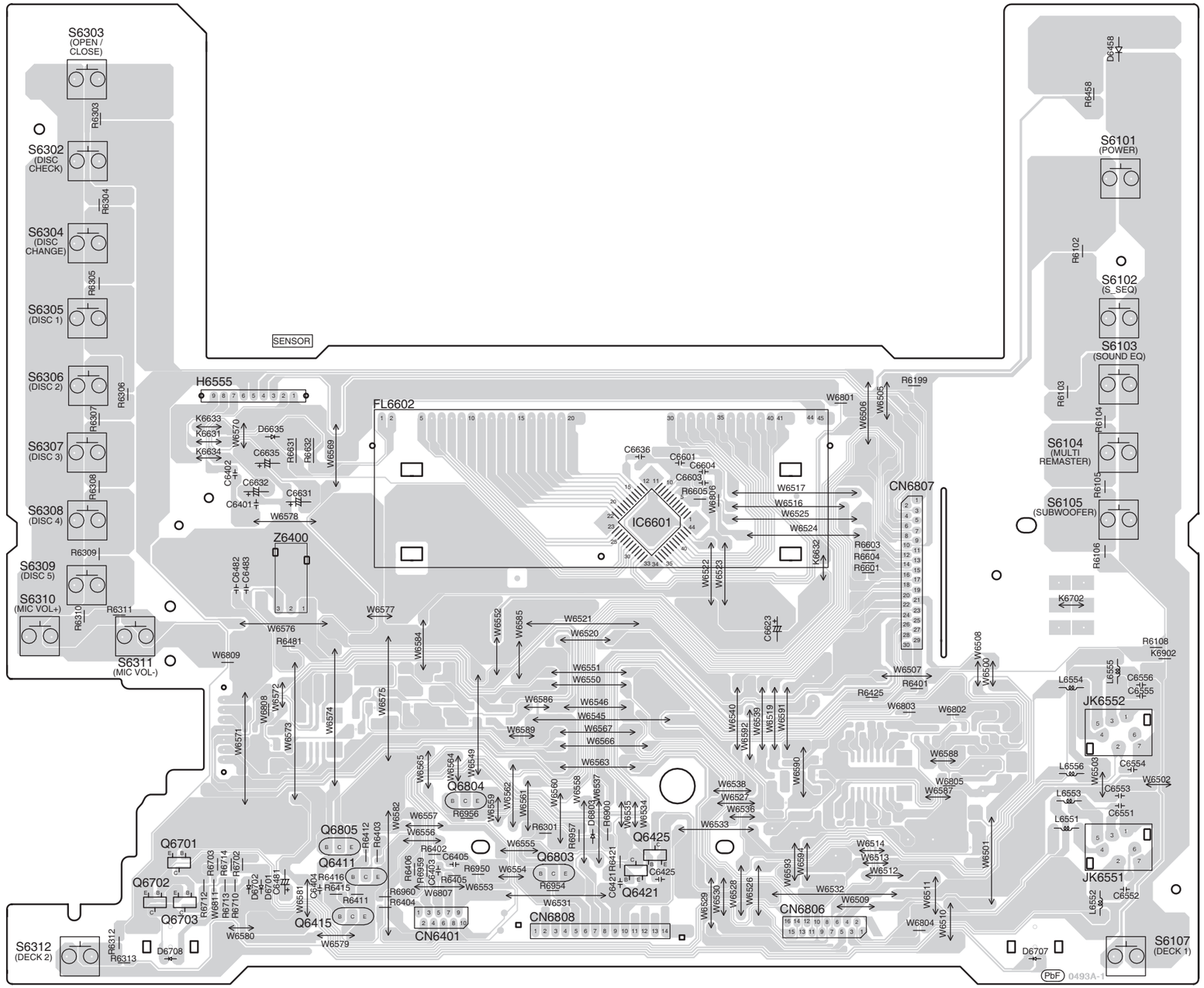


CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

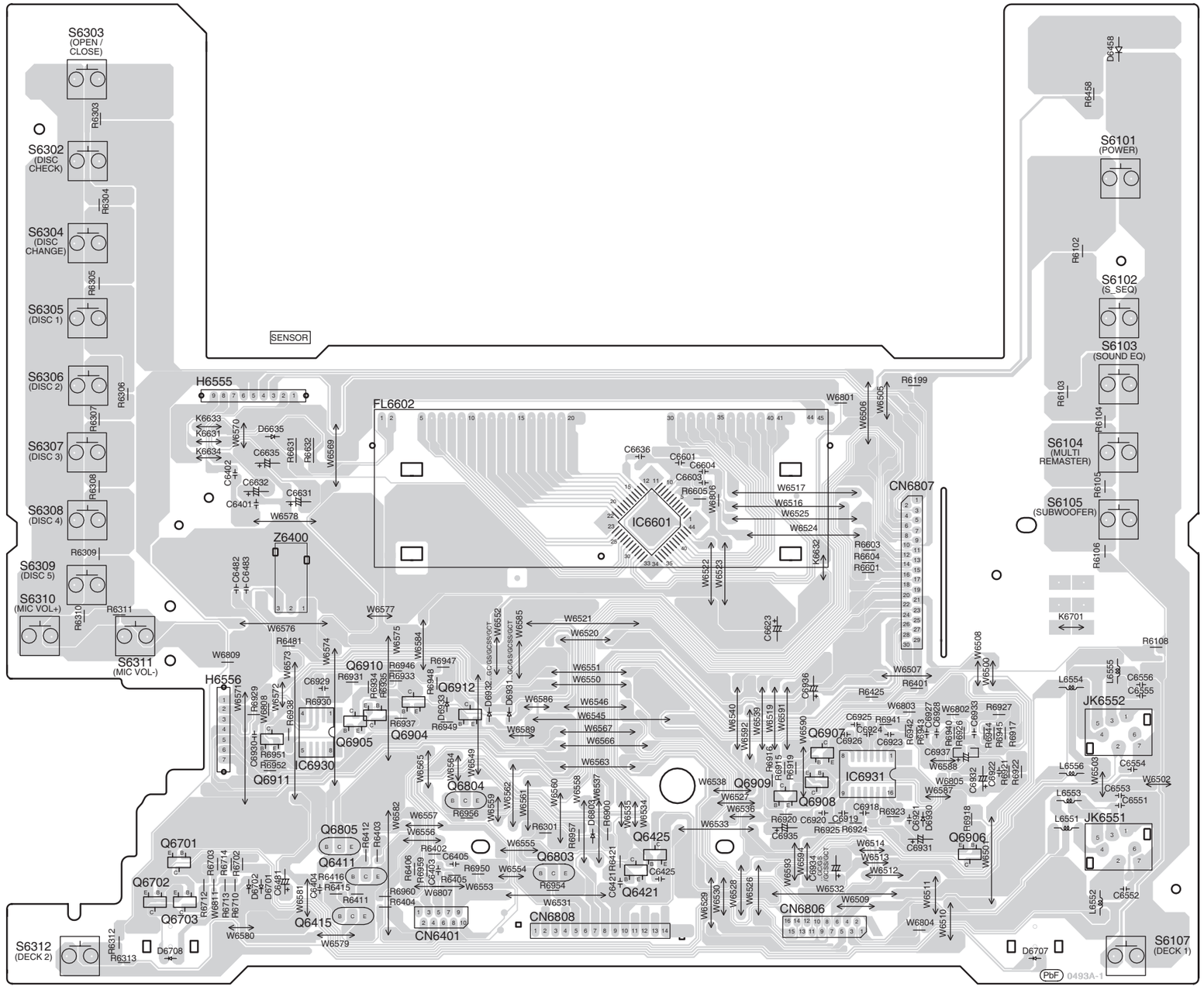
G POWER P.C.B (REPX0522B)



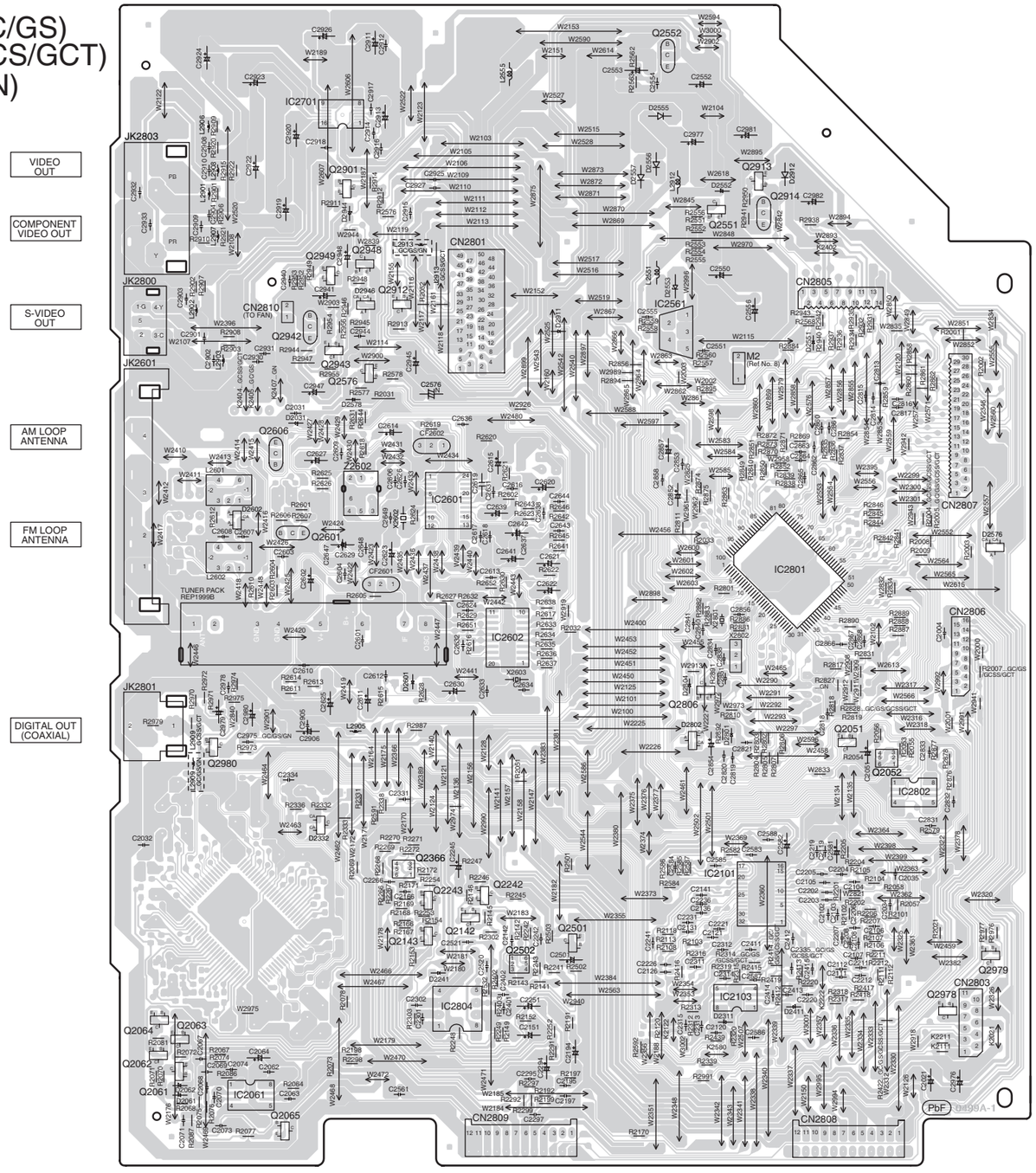
C PANEL P.C.B (REPX0541B...GN)



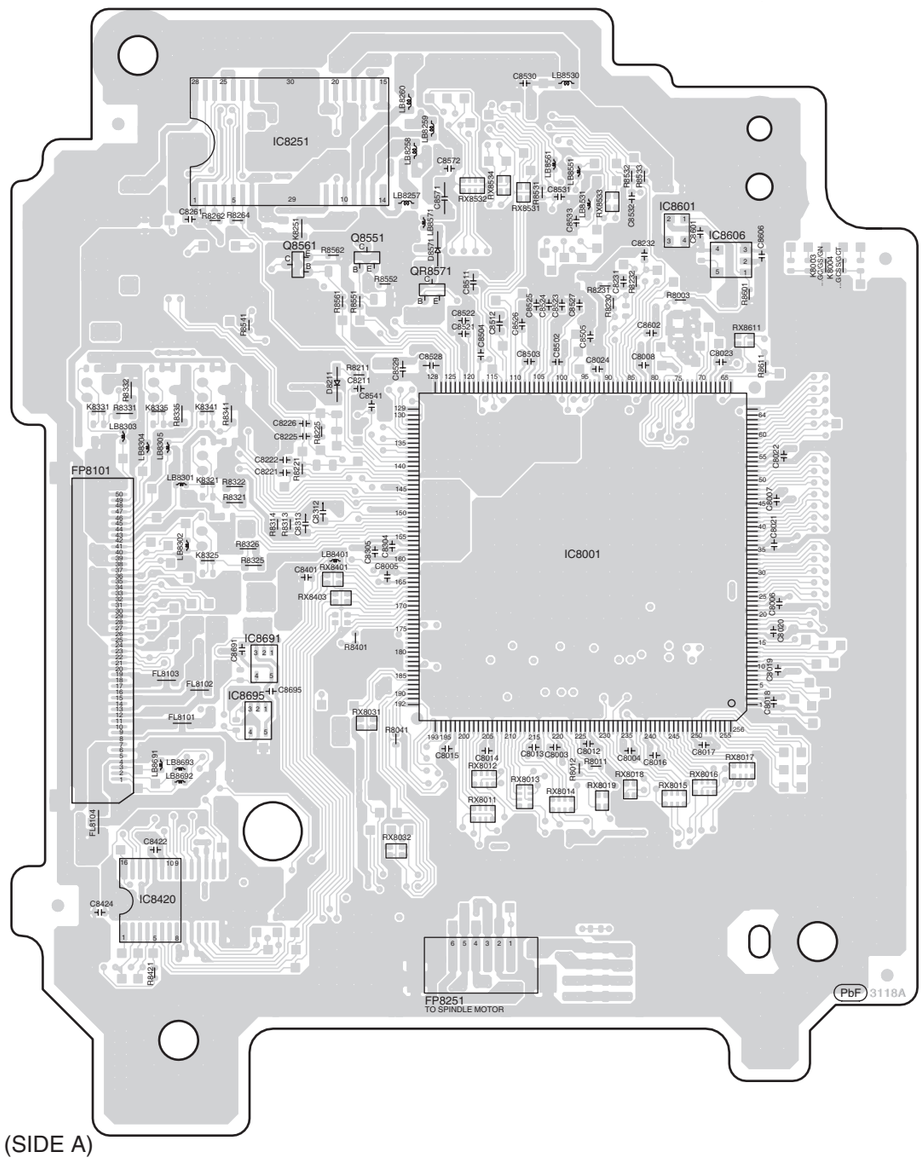
C PANEL P.C.B (REPX0541A...GC/GS/GCS/GCT)



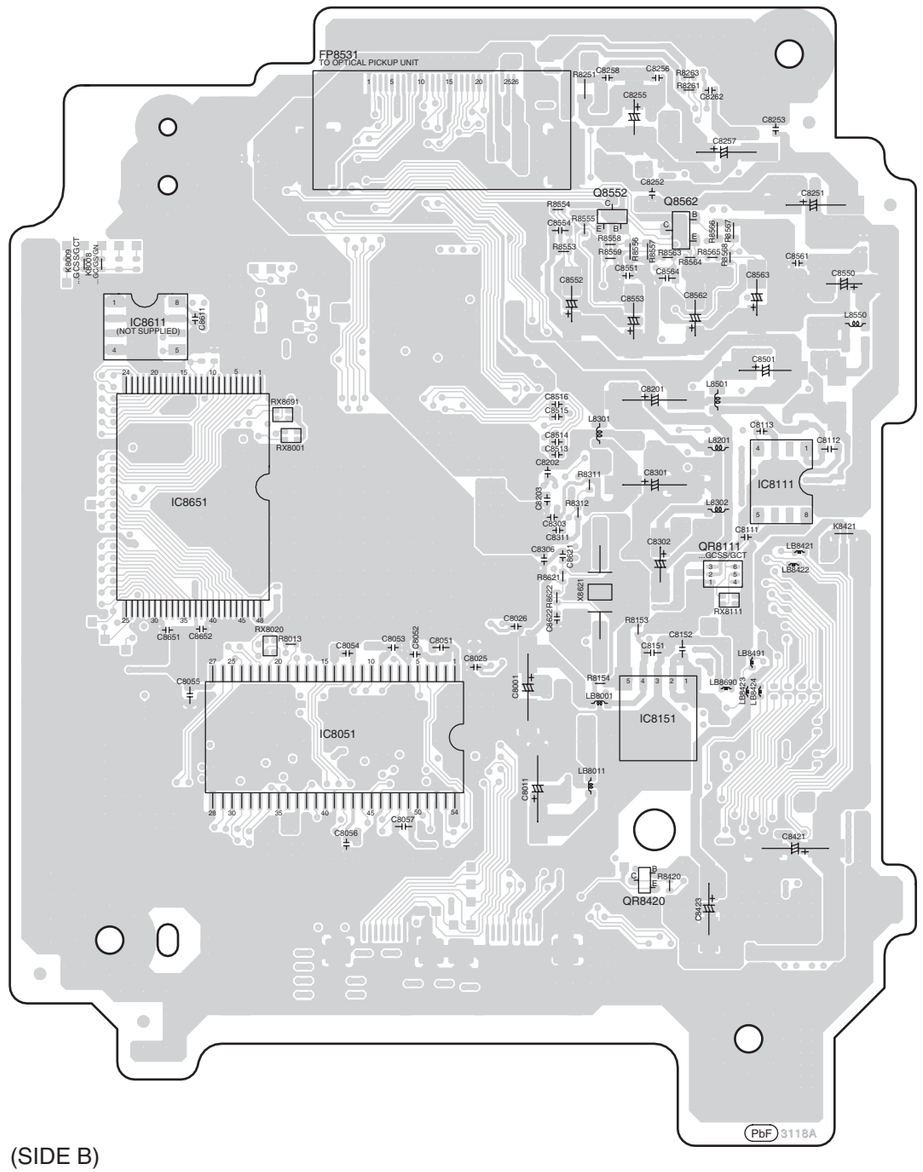
B MAIN P.C.B (REPX0547A...GC/GS)
(REPX0547B...GCS/GCT)
(REPX0547C...GN)



A DVD MODULE P.C.B (REP4012D...GC/GS/GN)
(REP4012E...GCS/GCT)

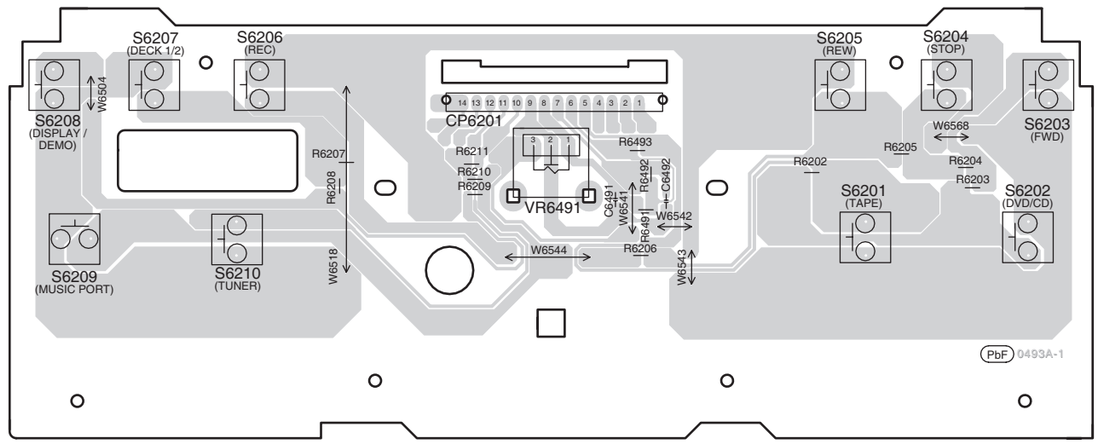


(SIDE A)



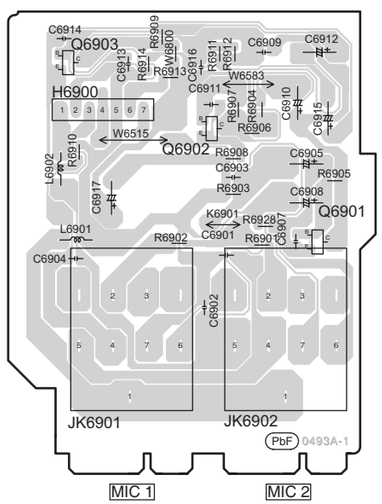
(SIDE B)

D TACT SWITCH P.C.B (REPX0541A...GC/GS/GCS/GCT) (REPX0541B...GN)



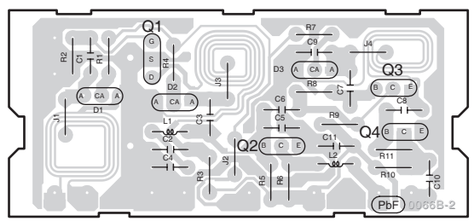
VOLUME

F MIC P.C.B (REPX0541A ...GC/GS/GCSS/GCT)

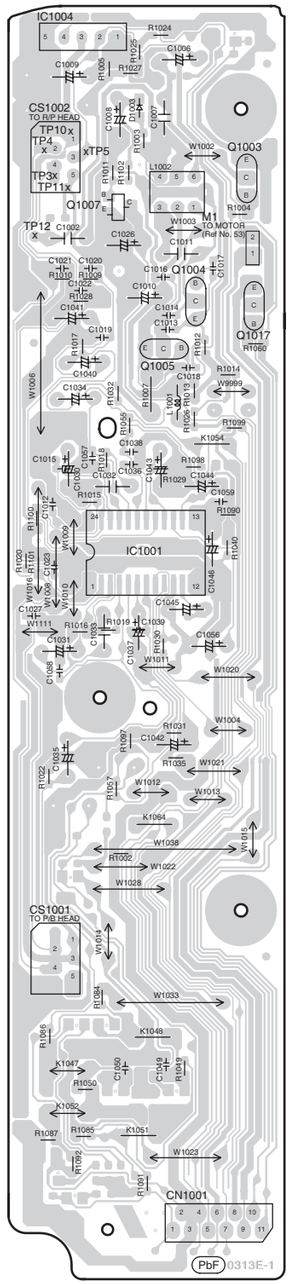


MIC 1 MIC 2

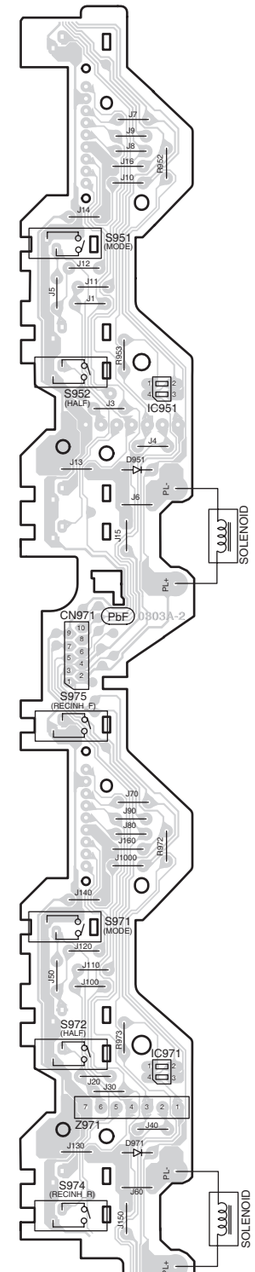
J TUNER P.C.B (REP1999B)



H DECK P.C.B (REPX0331F)



I DECK MECHANISM P.C.B (REPX0321B)



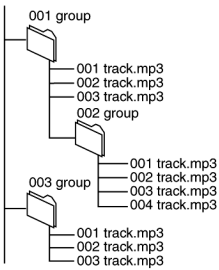
Tips for making data discs

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.
- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files (Files are treated as content and folders are treated as groups on this unit.)

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).
Files must have the extension:
".WMA" or ".wma"
".MP3" or ".mp3"
".JPG", ".jpg", ".JPEG" or ".jpeg"

e.g. MP3



WMA

- You cannot play WMA files that are copy protected.
- This unit does not support Multiple Bit Rate (MBR).

MP3

- This unit is not compatible with ID3 tags.
- Compatible sampling rates: 8 kHz, 11.02 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz and 48 kHz.

JPEG

- To view JPEG files on this unit:
  - Take them on a digital camera that meets the DCF (Design rule for Camera File system) Standard Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture unviewable.
  - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g.: TIFF) or play pictures with attached audio.

MPEG4

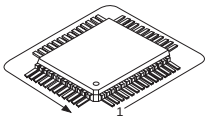
- MPEG4 files must have the extension ".ASF" or ".asf".
- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD video recorders with this unit.
- The recording date may differ from that of the actual date.

DivX

- DivX files must have the extension ".DIVX", ".divx", ".AVI", or ".avi".
- GMC (Global Motion Compensation) is not supported.
- DivX files greater than 2 GB or have no index may not play properly on this unit.
- This unit supports all resolutions up to maximum of 720×480 (NTSC) / 720×576 (PAL).
- You can select up to 8 types of audio and subtitles on this unit.

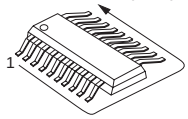
Official DivX® Certified product.
Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files.
DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

C2CBYY000267 (100P)
C0HBBB0000057 (44P)
MN2DS0009VP (256P)

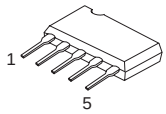


AN7348S-E1 (24P)
C0ABBB000230 (8P)
C0FBBK000049 (16P)
C1BB00000732 (32P)
C1BB00000962 (24P)
C1BB00001061 (16P)
C1CB00001937 (20P)
C0CBCBD000018 (8P)
C0JBAB000011 (14P)

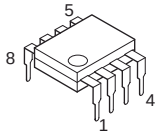
C0ABBB000230 (8P)
C0EBA0000029 (4P)
C3ABPG000145 (54P)
C9ZB00000498 (16P)



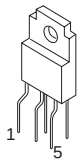
C1AA00000612
C0DBEHG00006



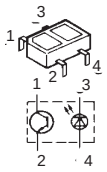
C0AABA000009



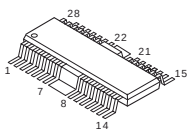
C0DAAMH00012



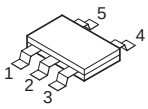
CNB13030R2AU



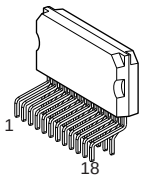
C0GBG0000048



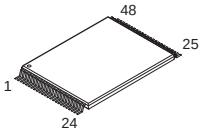
C0EBE0000455
C0JBAA000346



C1BA00000407



RFKWMHA0H160(48P)
- (For GC/GN/GS)
RFKWMHA0J160(48P)
- (For GCS/GCT)



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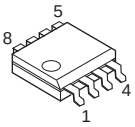

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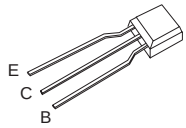

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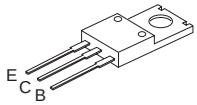

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B1ADCF000063
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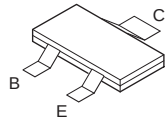

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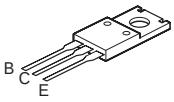

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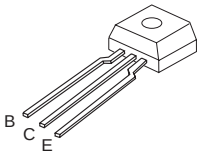

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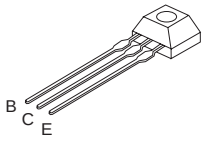

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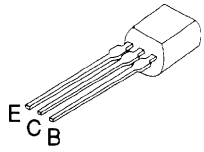

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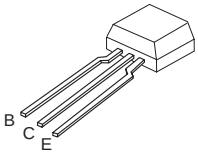

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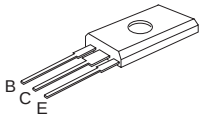

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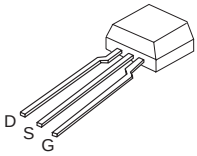
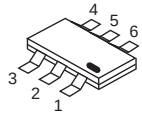


XP0621400L



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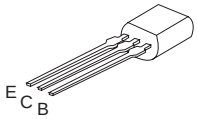

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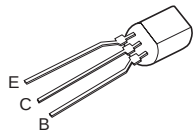

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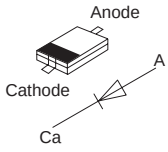

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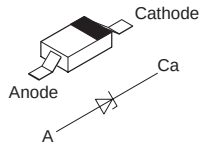

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B0BC7R500001
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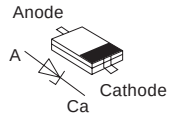

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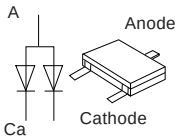

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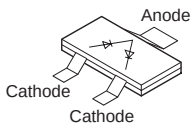

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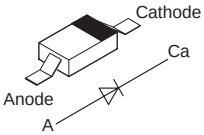

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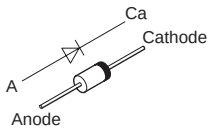

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B0BA03000020
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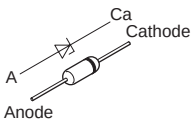
B0BA5R700008

B0BA6R800008
B0BA9R600002



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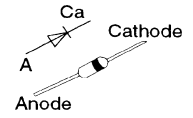

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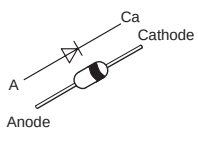

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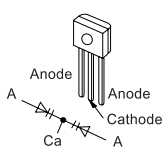

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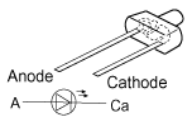

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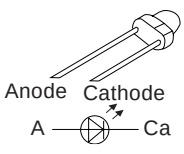
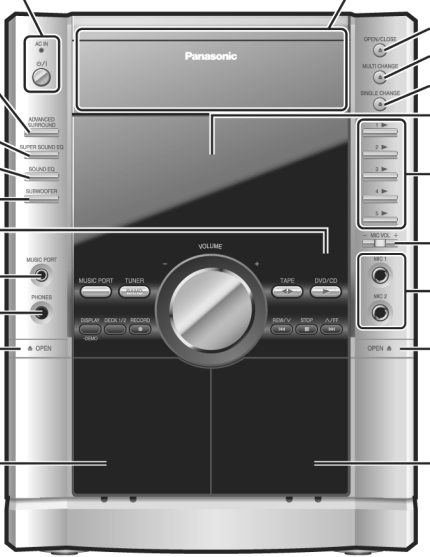


Main Unit

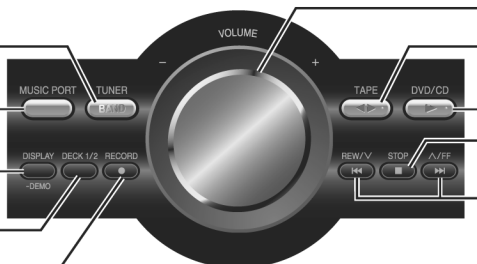
AC supply indicator (AC IN)
This indicator lights when the unit is connected to the AC mains supply.

❶ Standby/on switch [⏻/I]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.



[ADVANCED SURROUND]
[SUPER SOUND EQ]
[SOUND EQ]
[SUBWOOFER]
Remote control signal sensor
MUSIC PORT jack
Headphone jack (PHONES)
Deck 1 [⏏, OPEN]
Deck 1 cassette holder

Disc trays
Disc tray [⏏, OPEN/CLOSE]
[⏏, MULTI CHANGE]
[⏏, SINGLE CHANGE]
Display
[1▶]–[5▶]
(disc direct play buttons)
[–MIC VOL+]
(Southeast Asia only)
Microphone jacks (MIC 1, 2)
(Southeast Asia only)
Deck 2 [OPEN, ⏏]
Deck 2 cassette holder



[BAND, TUNER]
[MUSIC PORT]
[DISPLAY,–DEMO]
[DECK 1/2]
[●, RECORD]

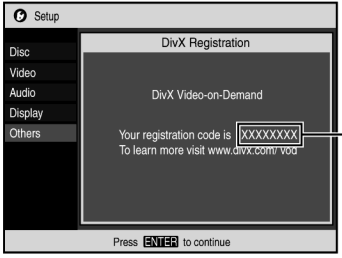
❷ [–VOLUME+]
❸ [◄ ►, TAPE]
❹ [▶, DVD/CD]
❺ [■, STOP]
❻ Disc skip/search/slow-motion play, tape fast-forward/rewind, tuning, time adjustment [⏮, REW/∨, ⏭, ∧/FF]

DivX VOD Contents

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the online instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

Display the unit's registration code



- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the first time, another registration code is then displayed in "DivX Registration".
  Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit's code, you will not be able to play this content. (**"Authorization Error"** is displayed.)

Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays are displayed. You cannot play this content when the number of remaining plays is zero. (**"Rental Expired"** is displayed.)

When playing this content

- The number of remaining plays is reduced by one if:
  - you press [⏻] or press and hold [−SETUP].
  - you press [■]. (Press [❚❚] to pause play.)
  - you press [|◀◀, ▶▶|] (SKIP) or [◀◀, ▶▶, SLOW/SEARCH] etc. and arrive at another content or the start of the content being played.
- Resume and Marker functions do not work.

Discs that can be played

Operations in these instructions are described mainly with formats. Icons such as DVD-V show the formats.

DVD VIDEO DVD VIDEO	**DVD-V** DVD-V —
COMPACT disc DIGITAL VIDEO COMPACT disc SUPER VIDEO	**Video CD** VCD ● Including SVCD (Conforming to IEC62107).
DVD RAM RAM4.7	**DVD-RAM** DVD-VR MP3 JPEG MPEG4 DivX※3, ※4 ● DVD-VR Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc. ● JPEG Recorded with Panasonic SD multi cameras or DVD video recorders using the DCF (Design rule for Camera File system) Standard Version 1.0. ● MPEG4 Recorded with the Panasonic SD multi cameras or DVD video recorders [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system].
DVD R R4.7 DVD RW DVD R R DL	**DVD-R (DVD-Video)**※1 **/DVD-RW (DVD-Video)** DVD-V ● Discs recorded and finalized※2 on DVD video recorders or DVD video cameras. **DVD-R (VR)**※1 **/DVD-RW (VR)** DVD-VR ● Discs recorded and finalized※2 on DVD video recorders or DVD video cameras using Version 1.1 or 1.2 (DVD-R only) of the Video Recording Format (a unified video recording standard). **DVD-R/DVD-RW** MP3 JPEG ● Finalize※2 the disc after recording. **DVD-R (DivX Video)/DVD-RW (DivX Video)** DivX※3, ※4 ● Finalize※2 the disc after recording.
—	**+R (Video)**※1 **/+RW (Video)** DVD-V ● Discs recorded and finalized※2 on DVD video recorders or DVD video cameras.
COMPACT disc DIGITAL AUDIO COMPACT disc DIGITAL AUDIO TEXT	**CD** CD WMA MP3 JPEG VCD MPEG4 DivX※3, ※4 ● This unit can play CD-R/RW recorded with the above formats. Close the sessions or finalize※2 the disc after recording. ● CD This unit is compatible with HDCD, but does not support the Peak Extend function (a function which expands the dynamic range of high level signals). HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs. ● WMA MP3 JPEG This unit also plays HighMAT discs. ● WMA This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).

※1 Includes single-sided, dual-layer discs.
※2 A process that allows play on compatible equipment.
※3 Functions added with DivX Ultra are not supported.
※4 Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files. Certified to the DivX Home Theater Profile. GMC (Global Motion Compensation) is not supported.

- It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.

■ Discs that cannot be played

DVD-RW Version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6 GB and 5.2 GB DVD-RAM, and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

Playing DVDs and Video CDs

The producer of these discs can control how they are played so you may not always be able to control play as described in these operating instructions (for example if the play time is not displayed or if a Video CD has menus). Read the disc’s instructions carefully.

Note about using a DualDisc

- The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.
- Do not use a DualDisc in this unit as it may not be possible to insert it correctly and it may get scratched or scraped.

■ Disc handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
  - Discs with exposed adhesive from removed stickers or labels (rented discs, etc).
  - Discs that are badly warped or cracked.
  - Irregularly shaped discs, such as heart shapes.

■ To clean discs

Wipe with a damp cloth and then wipe dry.

■ Video systems

- This unit can play PAL and NTSC, but your television must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC television.
- This unit can convert NTSC signals to PAL60 for viewing on a PAL television (“Video” tab – “NTSC Disc Output”).

IC5301
C1BA00000407
2-CH DIGITAL AMP

IC5501
C1BA00000407
2-CH DIGITAL AMP

HP_L(R)
MUTE_A
DVD_SUPPLY
SUBWOOFER
DC_DET
FAN
HP_SW
HP_L(R)
SYNC
MPORT_SW
MIC_SW
PCONT/EFP_/CE
DVD_SUPPLY
DC_DET
F_HOP
HP_SW
MPORT_SW
MIC_SW
PCONT/EFP_/CE
SYNC
MUTE_D_AMP
MUTE_A
F_HOP

Q5150 PCONT SWITCH
Q5152 SWITCH
Q5151 MODE SWITCH
Q5103, Q5104 FAN ON/OFF SWITCH
Q5952 SYNCHRONISING SWITCH
Q5707 REGULATOR
Q2942 +VE FAN -VE
Q2949,Q2948 Q2943 FAN
D2944
Q5111 15V VOLTAGE REGULATOR
Q5708,Q5709 REGULATOR
Q5115 5.7V VOLTAGE REGULATOR
D5123,D5214, D5127,D5128
Q5101,Q5110 CURRENT CONTROL SWITCH/ VOLTAGE REGULATOR
Q5102,Q5108,Q5109 CURRENT CONTROL SWITCH/ SWITCH/ VOLTAGE REGULATOR
Q5112~Q5114 CURRENT STABLISER/ LIMITER SWITCH/ 11V VOLTAGE REGULATOR
D5970~D5973
FP5950
Q5951 VOLTAGE REGULATOR (-VP)
D5959
TO FL DISPLAY
Q5950 SYSTEM 6V VOLTAGE REGULATOR
FOR GCS/GS/GCT ONLY
Q5954 CURRENT LIMITING SWITCH
D5961, D5962, D5964
D5963
FOR GC ONLY
D5974~D5977
D5950~D5953
FOR GCS/GS/GCT ONLY
F2
S5950 SW VOLTAGE SELECTOR
T5950 POWER TRANSFORMER
T5951 SUB TRANSFORMER
RL5950
F1
Z5950
L5950 LINE FILTER
JK5950 AC INLET
FOR ALL SERIES EXCEPT GC
D5126
Q5953 PCONT CONTROL
IC5201
C0JBAB000011
LOGIC IC
X5202
X5201
Q5201 HOPPING SWITCH
Q5202 HOPPING SWITCH
L5301
L5501
L5402
L5302
L5401
SUBWOOFER
RIGHT CH
LEFT CH
RIGHT CH
LEFT CH
JK5102
JK5101
RCH
JK6551 PHONES

SIGNAL LINES

: MAIN SIGNAL LINE
: CD SIGNAL LINE
: AM SIGNAL LINE
: PLAYBACK SIGNAL LINE
: FM OSC SIGNAL LINE
: AM OSC SIGNAL LINE
: FM/AM SIGNAL LINE
: RECORD SIGNAL LINE
: FM SIGNAL LINE
: AUX SIGNAL LINE
: CD-DA (AUDIO/VIDEO) SIGNAL LINE

( ) Indicates the Pin No. of Right Channel.

NOTE : Signal Lines are applicable to the Left Channel only.

IC2101
C1BB00000732
ASP IC

B1L(R) 7(8)
A1L(R) 5(6)
VIN2(R) 3
VIN1(R) 1
REC1(L) 32
REC2(L) 31
C1L(R) 9(10)
D1L(R) 11(12)
SI 18
SC 17
OUTIN1(2) 22(21)

IC2804
C0AABA000009
IC OP-AMP
2(6)
3(5)
1(7)

Q2502 SWITCH
Q2142, Q2242 AGC CONTROL SWITCH
Q2501 MUTING CONTROL SWITCH
Q2143, Q2243 MUTING SWITCH
Q2366 HEADPHONE MUTING SWITCH

+B
D2555~D2557
Q2552 DVD SUPPLY SWITCH

IC2561
C0DAAMH00012
REGULATOR
VOUT 2
VREF2 5
VIN 1

IC2061
C0ABBB000244
IC OP AMP
6 5 7
3 2 1

Q2551 DVD SUPPLY SWITCH
Q2065 SUBWOOFER MUTING SWITCH
Q2064 SUPPLY CONTROL SWITCH
Q2063 SUPPLY CONTROL SWITCH
Q2061 LEVEL CONTROL SWITCH
Q2062 LEVEL CONTROL SWITCH

IC2103
C0ABBB000230
IC OP-AMP
6(2)
5(3)
7(1)

FOR ALL SERIES EXCEPT GN

IC6931
C1BB00001061
IC ECHO
LPF_IN 2
LPF_OUT 3
LPF2_IN 10
LPF2_OUT 9
OP2_IN 12
OP2_OUT 11

Q6702 LED SWITCH
Q6703 LED SWITCH
Q6701 LED SWITCH
D6707
D6708
+B

RCH
JK6552
MUSIC PORT INPUT

Q6901-Q6903 MIC AMP
JK6901,JK6902
MIC1,MIC2
FOR ALL SERIES EXCEPT GN

IC6930
C0ABBB000244
IC OP-AMP
2
3
1
FOR ALL SERIES EXCEPT GN

FOR ALL SERIES EXCEPT GN
Q6912 MIC LEVEL CONTROL SWITCH
Q6904,Q6910 SWITCH/ MIC LEVEL SWITCH
Q6905,Q6911 SWITCH/ MIC LEVEL SWITCH
D6932
D6931

+B
D2802
Q2806 RESET SWITCH

IC2802
EEPROM
(NOT SUPPLIED)
6 5 4 3

Q6411,Q6421
PLUNGER SUPPLY SWITCH/ PLUNGER-ON/OFF SWITCH
PL971
D971

D2332

Q6907 MUTING SWITCH
Q6908 SWITCH
Q6906 SWITCH
Q6909 SWITCH
FOR ALL SERIES EXCEPT GN

Q6803,Q6804 DECK SUPPLY CONTROL SWITCH
Q6805 PCONT SWITCH
Q2576 DVD DETECT SWITCH
D2576

S6101~S6105,S6107,
S6201~S6210,
S6302~S6312
92 ~ 94
KEY1~KEY3

SYNC 20
MUTE_D 39
MUTE_A 40
F_HOP 7
PCONT/EFP_/CE 46

PLG2 57
EE_DAT 43
EE_CLK 42
EE_CS/EFP/EPH 41
ASP_DAT 26
ASP_CLK 27
/RESET 12
MIC_LVL1 50
MIC_LVL2 51
LM_L 1
DVD_PCONT 5
ECHO_MUTE 76
ECHO_1 69
ECHO_2 70
ECHO_3 75
SW_LVL2 45
SW_LVL1 44
LED_CTRL2 49
LED_CTRL1 48
DC_DET 47

C2CBYY000267 IC2801 MICROPROCESSOR

CB_B
CR_R
PY
S_Y
S_C

IC2701
C9ZB00000498
VIDEO
BUFFER IC

CRIN 9
CBIN 8
CYIN 6
YIN 4
CIN 2

CYOUT 13
CBOUT 12
CROUT 11
VOUT 15
YOUT 14
COUT 16

Y
CR
CB
VIDEO OUT
S-VIDEO
JK2803
JK2800

FL6602
FL DISPLAY
SG1 SG17 5~20,41
GR1 GR11 30~40
FROM POWER TRANSFORMER

IC6601
C0HBB0000057
FL DRIVER
S1 S17 14~29,31
G1 G12 32~42
STB 9
DIN 7
CLK 8

IC1001
AN7348S-E1
P.B EQ/REC AMP/
ALC/TPS AMP

(DECK 1) P.B. HEAD
(DECK 2) R/P HEAD
LCH
24(23) 1(2) 22(3) 21(4) 17(8)
20(5) 18(7)
LOGIC L/H
ALC
NOR/CrO & HI/LO LOGIC
LOGIC REC/PB
RIPPLE REJECTION
+B

(DECK 2) ERASE HEAD
L1002
BIAS OSC CONTROL
Q1004, Q1005, Q1007
Q1003
D1003
SWITCHING (BEAT PROOF/ RECH)

IC1004
C1AA00000612
R/P SELECT

Q2978
CONTROL SWITCH

Q1017
MOTOR SWITCH
M1002

Q2979
SUPPLY CONTROL SWITCH

DVD_MIXL(R)
ZFLAG

Q2051
DVD CONTROL SWITCH
Q2052
SWITCH

TO
CD LOADING CIRCUIT

PLLCE
PLLDA
PLLCLK

Q2901 SWITCH
Q2912 MUTE SWITCH

Q2914 SUPPLY CONTROL SWITCH
D2912
Q2913 PLUNGER ON/OFF SWITCH

MODE S951
HALF S952

IC951
CNB13030R2AU
PHOTO INTERRUPTER

HALF S972
RECINH_R S974
MODE S971
RECINH_F S975
Z971 INTERFACE

IC971
CNB13030R2AU
PHOTO INTERRUPTER

Q6415,Q6425
PLUNGER SUPPLY SWITCH/ PLUNGER ON/OFF SWITCH
PL971
D951

ST/DO 21
SD 22
DVD_CLK 37
DVD_STAT 36
DVD_CMD 35

PLLCLK 30
PLLDA 29
PLLCE 3
WIDE_1 4
DVD_MUTE 6
FL_CS 72
FL_DOUT 73
FL_CLK 74
ST_SW 78
MOT_CCW 79
MOT_CW 80
HOME_SW 81
CAM_SENSOR 82
OPEN_SW 87
BOTTOM_SW 84
PLAY_SW 85
UP_SENSOR 86
PLUNGER 83
MODE_1 53
HALF_1 52
PHOTO_1 97
DECK2 91
PHOTO_2 95
MTR 58
REC 59
DECK1_H 60
PLG1 56

C2CBYY000267 IC2801 MICROPROCESSOR
C2CBYY000267 IC2801 MICROPROCESSOR

V_JOG_A 67
V_JOG_B 68
VR6491
JOG VOL

XC_IN 10
XC_OUT 11
X2801

X_OUT 13
X_IN 15
X2802

RMT 18
Z6400
REMOTE SENSOR

PY
CB_B
CR_R
S_Y
S_C
DVD_MIXL(R)
ZFLAG
DVD_CMD
DVD_STAT
DVD_CLK
A
TO MAIN BLOCK

IC8420
C0FBBK000049
2-CH DAC IC
15(14)
VOUTL(R)
LRCK
DATA1
BCK
SCK
MD
MC
MS
ZEROR
8
6
7
5
4
3
2
16

QR8420
MUTING SWITCH

IC8695
C0JBAA000346
AND GATE LOGIC IC
IC8691
C0JBAA000346
AND GATE LOGIC IC
+B
4
5
1
2

149 DAC1OUT
148 DAC2OUT
147 DAC3OUT
156 DAC4OUT
157 DAC5OUT
167 LRCK
169 ADOUT3
168 SRCK
166 DACCK
77 SBO3
78 SBT3
76 STBDAC
80 P13
73 OP_CPU_CMD
74 OP_CPU_STAT
75 OP_CPU_CLK

MN2DS0009VP IC8001 DV3.2 LSI

IECOUT
173
Q2980
OPTICAL
JK2801

AMANT
FMANT
Z2620
RF AMP
MIXER
OSC
BUFFER
+B (FM)
CF2601
Q2601
FM IF AMP
CF2602
L2601
D2602
L2602
+B

RCH
ALC
AM OSC
AM MIX
AM RMAMP
BUFFER
AGC
DECODER
PHASE DET
PILOT CANCEL
STEREO SWITCH
LEVEL DET
S-CURVE
FM IF
FM DET
AM/FM IF BUFFER
AM IF
AM DET
COMP
VCO
TUNING DRIVE
FF
PILOT DET
REG
SD
ST
X2602

IC2601
C1BB00000962
FM/AM IF AMP, DET/AM OSC, MIX/FM MPX

Z2602
AM IFT

ST/DO
SD

PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
X2603
UNLOCK DETECTOR
SWALLOW COUNTER 1/6,1/17,4 BITS
12 BITS PROGRAMMABLE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
C2B I/F
POWER ON RESET
DO
CE
DI
CL
ST/DO
PLLCE
PLLDA
PLLCLK

Q2606
TUNER 15V SUPPLY SWITCH
+B (FM)

IC2602
C1CB00001937
PLL FREQUENCY SYNTHESIZER

A
TO CD DRIVE BLOCK

OPTICAL PICKUP

HFM

OUT

VCC 2

LDU

17 LD(DVD)

16 LD(CD)

SW 15

1M 8

SUB1 14

SUB2 13

VREF 11

RF 9

FE1 6

FE2 7

TC 4

TD 5

TB 2

TA 3

TRACKING COIL

FOCUS COIL

SPINDLE MOTOR UNIT

TRV_INNER_SW 1

HFM

LDDVD

LDCD

SUBSEL

PIN(CD)

PIN(DVD)

SUB1

SUB2

VREF1

VREF2 (RF-)

RF

FE1(DVD/CD)

FE2(DVD/CD)

TC(DVD)

TD(DVD)

TB(DVD)

TA(DVD)

T-

T+

F-

F+

TRM+ 3

TRM- 4

SPM+ 5

SPM- 6

Q8552 SWITCH

Q8562 SWITCH

Q8551 SWITCH

Q8561 SWITCH

QR8571 +B SUPPLY CONTROL SWITCH

IC8251
C0GBG0000048
DRIVER IC

VO1- 13

VO1+ 14

VO2- 11

VO2+ 12

VO4+ 15

VO4- 16

VO3+ 17

VO3- 18

OPIN- 5

OPOUT 6

BIAS 1

OPIN+ 4

LDIN 24

BIAS2 25

TRIN 26

VIN3 23

MUTE12 9

MUTE4 20

MUTE3 27

VIN1 2

VIN2 3

P14 81

LPO1 124

AD0 139

LPO2 126

DRV5 86

LPC2 125

LPC1 123

VIN9 130

VIN5 131

VIN10 129

VIN6 132

VREFH 127

RFINP 113

RFINN 114

VIN7 133

VIN8 134

VIN3 135

VIN3RF 118

VIN4 136

VIN4RF 117

VIN2 137

VIN2RF 116

VIN1 138

VIN1RF 115

DRV1 90

DRV3 88

DRV4 87

AD4 142

PWM1 144

AD2 141

PWM0 145

DRV0 91

VHALF 128

AD1 140

DRV2 89

MN2DS0009VP IC8001 DV3.2 LSI

OSCO 163

OSCI 162

X8621

P2 67

P1 66

6

5

IC8611
C3EBGC000055
EEPROM
(NOT SUPPLIED)

IC8111
C0CBCBD00018
3.3 REGULATOR IC

+B 1 OUT IN 8 +B

5

QR8111 SWITCH +B

IC8151
C0DBEHG00006
REGULATOR IC

+B 4 OUT IN 2 +B

IC8051
C3ABPG000145
64 SDRAM IC

DQ0 2,4,5,7,8,10,11, 13,42,44,45,47, 48,50,51,53

DQ15

A0 22-26, 29-35

A11

BA0 20

BA1 21

LDQM 15

UDQM 39

CS 19

CLK 38

RAS 18

CAS 17

WE 16

IC8651
RFKWMHA0H160...GC/GS/GN
RFKWMHA0J160...GCSS/GCT
16M FLASH ROM IC

A16 9, 16, 17, 48

A19

A0

A15 1~8, 18-25

DQ0

DQ15 29-36, 38-45

A20 10

nWE 11

nCE 26

nOE 28

XRESET 12

IC8601
C0EBA0000029
RESET IC

1

1

IC8606
C0EBE0000455
RESET IC

MDQ0 198~203, 206~213, 216, 217

MDQ15

MA0 230, 232, 236, 237, 240~247,

MA11

BA0 231

BA1 235

DQM0 219

DQM1 220

NCS# 229

MCK 223

MCK# 225

NRAS 228

NCAS 227

NWE 221

EXADR16 41, 54, 56, 57

EXADR19

EXADT0 18, 42, 43, 46~51, 58~64

EXADT15

EXDT0 23~33, 36~40

EXDT15

P0 65

NEXWE 55

NEXCE 19

NEXOE 20

NRST 84

MN2DS0009VP IC8001 DV3.2 LSI